Patent Claims

1.   A ligand-binding domain (LBD) of the ultraspiracle protein (USP) in crystalline form.

5

2.   A LBD according to Claim 1, wherein the LBD is a LBD of the Heliothis virescens USP.

3.   A LBD according to Claim 1, wherein the LBD comprises the amino acid

10   sequence as shown in SEQ ID NO: 1.

4.   A LBD according to Claim 1, wherein the LBD exists in the form of a complex with a ligand.

15   5.   A LBD according to Claim 1, wherein the LBD   has the structure coordinates defined in Table 1, below:

Table 1
REMARK coordinates from restrained individual B-factor refinement
20   REMARK refinement resolution: 20.0 - 1.65 A
REMARK starting r= 0.2151 free_r= 0.2506
REMARK final   r= 0.2112 free_r= 0.2459
REMARK B rmsd for bonded mainchain atoms= 1.437 target= 1.5
REMARK B rmsd for bonded sidechain atoms= 2.272 target= 2.0
25   REMARK B rmsd for angle mainchain atoms= 2.299 target= 2.0
REMARK B rmsd for angle sidechain atoms= 3.310 target= 2.5
REMARK rweight= 0.1000 (with wa= 1.12122)
REMARK target= mlf steps= 30
REMARK sg= P4(3)22 a= 58.211 b= 58.211 c= 144.687 alpha= 90 beta= 90 gamma= 90
30   REMARK parameter file 1 : CNS_TOPPAR:protein_rep.param
REMARK parameter file 2 : CNS_TOPPAR:water_rep.param
REMARK parameter file 3 : eph.par
REMARK molecular structure file: alternate.mtf
REMARK input coordinates: anneal_2.pdb
35   REMARK reflection file= /home/billas/USP/SCALE0400/merge1A65/usp_20a1a65 10 cv
REMARK ncs= none
REMARK B-correction resolution: 6.0 - 1.65
REMARK initial B-factor correction applied to fobs :
REMARK B11= -1.985 B22= -1.985 B33= 3.970
40   REMARK B12= 0.000 B13= 0.000 B23= 0.000
REMARK B-factor correction applied to coordinate array B: -0.193
REMARK bulk solvent: density level= 0.33501 e/A^3, B-factor= 48.7849 A^2
REMARK reflections with |Fobs|/sigma_F < 0.0 rejected
REMARK reflections with |Fobs| > 10000 * rms(Fobs) rejected
45   REMARK theoretical total number of refl. in resol. range: 30842 (100.0 %)

REMARK number of unobserved reflections (no entry or |F|=0): 1417 (4.6 %)
REMARK number of reflections rejected: 0 (0.0 %)
REMARK total number of reflections used: 29425 (95.4 %)
REMARK number of reflections in working set: 26453 (85.8 %)
5 REMARK number of reflections in test set: 2972 (9.6 %)
CRYST1 58.211 58.211 144.687 90.00 90.00 90.00 P 43 2 2
REMARK FILENAME="/home/billas/LUC/13cns/bind_2.pdb"
REMARK DATE: 4-Jun-00 14:33:10   created by user: billas
REMARK VERSION:1.0
10 ATOM   1 CB ALA 203   16.114 28.799 41.997 1.00 66.21
ATOM   2 C   ALA 203   15.029 28.899 39.746 1.00 66.49
ATOM   3 O   ALA 203   14.609 30.031 39.487 1.00 66.58
ATOM   4 N   ALA 203   17.364 29.707 40.068 1.00 66.33
ATOM   5 CA ALA 203   16.347 28.703 40.490 1.00 66.40
15 ATOM   6 N   ALA 204   14.387 27.790 39.393 1.00 66.05
ATOM   7 CA ALA 204   13.106 27.833 38.698 1.00 65.56
ATOM   8 CB ALA 204   12.933 26.584 37.843 1.00 65.11
ATOM   9 C   ALA 204   12.028 27.888 39.776 1.00 64.97
ATOM   10 O   ALA 204   12.259 27.413 40.890 1.00 65.54
20 ATOM   11 N   ALA 205   10.872 28.478 39.463 1.00 63.97
ATOM   12 CA ALA 205   9.773 28.563 40.431 1.00 62.46
ATOM   13 CB ALA 205   8.437 28.736 39.705 1.00 62.71
ATOM   14 C   ALA 205   9.798 27.243 41.190 1.00 61.33
ATOM   15 O   ALA 205   9.426 26.199 40.647 1.00 61.43
25 ATOM   16 N   GLN 206   10.251 27.285 42.439 1.00 59.43
ATOM   17 CA GLN 206   10.372 26.060 43.211 1.00 57.60
ATOM   18 CB GLN 206   11.198 26.298 44.472 1.00 58.55
ATOM   19 CG GLN 206   11.976 25.062 44.863 1.00 60.08
ATOM   20 CD GLN 206   12.831 24.542 43.712 1.00 61.69
30 ATOM   21 OE1 GLN 206   13.892 25.094 43.411 1.00 62.30
ATOM   22 NE2 GLN 206   12.360 23.486 43.053 1.00 61.64
ATOM   23 C   GLN 206   9.072 25.355 43.567 1.00 55.19
ATOM   24 O   GLN 206   8.089 25.972 43.983 1.00 55.16
ATOM   25 N   GLU 207   9.099 24.040 43.382 1.00 52.39
35 ATOM   26 CA GLU 207   7.970 23.165 43.644 1.00 49.47
ATOM   27 CB GLU 207   7.755 22.243 42.447 1.00 52.06
ATOM   28 CG GLU 207   6.603 21.264 42.591 1.00 55.45
ATOM   29 CD GLU 207   5.266 21.897 42.275 1.00 57.54
ATOM   30 OE1 GLU 207   4.249 21.167 42.254 1.00 58.63
40 ATOM   31 OE2 GLU 207   5.235 23.125 42.043 1.00 58.53
ATOM   32 C   GLU 207   8.273 22.311 44.861 1.00 45.64
ATOM   33 O   GLU 207   9.419 21.945 45.089 1.00 44.54
ATOM   34 N   LEU 208   7.244 21.996 45.637 1.00 41.48
ATOM   35 CA LEU 208   7.408 21.142 46.810 1.00 38.35
45 ATOM   36 CB LEU 208   6.204 21.323 47.752 1.00 36.20
ATOM   37 CG LEU 208   6.211 20.671 49.134 1.00 34.07
ATOM   38 CD1 LEU 208   7.495 21.026 49.867 1.00 32.61
ATOM   39 CD2 LEU 208   5.003 21.158 49.926 1.00 33.18
ATOM   40 C   LEU 208   7.472 19.709 46.267 1.00 38.07
50 ATOM   41 O   LEU 208   6.443 19.122 45.919 1.00 38.80
ATOM   42 N   SER 209   8.682 19.155 46.174 1.00 34.84
ATOM   43 CA SER 209   8.882 17.803 45.647 1.00 33.19
ATOM   44 CB SER 209   9.257 17.883 44.165 1.00 32.93
ATOM   45 OG SER 209   10.582 18.382 44.024 1.00 33.12
55 ATOM   46 C   SER 209   10.005 17.062 46.393 1.00 32.84
ATOM   47 O   SER 209   10.824 17.685 47.057 1.00 32.20
ATOM   48 N   ILE 210   10.048 15.736 46.261 1.00 32.33
ATOM   49 CA ILE 210   11.092 14.945 46.917 1.00 34.10

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        ATOM   50 CB  ILE  210    10.961 13.438 46.613 1.00 35.86
        ATOM   51 CG2 ILE  210    12.017 12.667 47.387 1.00 37.65
        ATOM   52 CG1 ILE  210     9.565 12.929 46.980 1.00 36.30
        ATOM   53 CD1 ILE  210     9.239 13.004 48.447 1.00 35.19
   5    ATOM   54 C   ILE  210    12.478 15.370 46.436 1.00 33.53
        ATOM   55 O   ILE  210    13.420 15.467 47.225 1.00 30.63
        ATOM   56 N   GLU  211    12.607 15.609 45.136 1.00 33.07
        ATOM   57 CA  GLU  211    13.898 16.012 44.587 1.00 33.86
        ATOM   58 CB  GLU  211    13.797 16.199 43.066 1.00 36.35
  10    ATOM   59 CG  GLU  211    15.042 16.838 42.436 1.00 40.50
        ATOM   60 CD  GLU  211    14.880 17.104 40.941 1.00 43.91
        ATOM   61 OE1 GLU  211    15.777 17.748 40.348 1.00 45.56
        ATOM   62 OE2 GLU  211    13.857 16.667 40.365 1.00 44.68
        ATOM   63 C   GLU  211    14.396 17.299 45.246 1.00 32.93
  15    ATOM   64 O   GLU  211    15.552 17.395 45.637 1.00 32.96
        ATOM   65 N   ARG  212    13.524 18.292 45.365 1.00 31.58
        ATOM   66 CA  ARG  212    13.914 19.545 45.994 1.00 30.93
        ATOM   67 CB  ARG  212    12.799 20.579 45.850 1.00 31.30
        ATOM   68 CG  ARG  212    13.111 21.897 46.547 1.00 34.79
  20    ATOM   69 CD  ARG  212    14.482 22.417 46.130 1.00 36.82
        ATOM   70 NE  ARG  212    14.880 23.599 46.886 1.00 40.98
        ATOM   71 CZ  ARG  212    16.109 24.103 46.876 1.00 41.42
        ATOM   72 NH1 ARG  212    17.055 23.527 46.148 1.00 43.03
        ATOM   73 NH2 ARG  212    16.395 25.178 47.596 1.00 43.71
  25    ATOM   74 C   ARG  212    14.277 19.375 47.478 1.00 29.92
        ATOM   75 O   ARG  212    15.218 20.000 47.970 1.00 30.04
        ATOM   76 N   LEU  213    13.529 18.541 48.195 1.00 28.52
        ATOM   77 CA  LEU  213    13.819 18.322 49.612 1.00 27.44
        ATOM   78 CB  LEU  213    12.711 17.471 50.272 1.00 25.96
  30    ATOM   79 CG  LEU  213    11.361 18.184 50.410 1.00 27.73
        ATOM   80 CD1 LEU  213    10.306 17.200 50.892 1.00 24.70
        ATOM   81 CD2 LEU  213    11.492 19.344 51.358 1.00 27.22
        ATOM   82 C   LEU  213    15.172 17.625 49.757 1.00 27.41
        ATOM   83 O   LEU  213    15.895 17.861 50.722 1.00 27.85
  35    ATOM   84 N   LEU  214    15.510 16.761 48.802 1.00 28.81
        ATOM   85 CA  LEU  214    16.792 16.068 48.874 1.00 30.82
        ATOM   86 CB  LEU  214    16.863 14.926 47.851 1.00 29.94
        ATOM   87 CG  LEU  214    16.112 13.655 48.272 1.00 30.12
        ATOM   88 CD1 LEU  214    16.047 12.663 47.117 1.00 30.68
  40    ATOM   89 CD2 LEU  214    16.820 13.015 49.467 1.00 31.09
        ATOM   90 C   LEU  214    17.914 17.067 48.646 1.00 33.09
        ATOM   91 O   LEU  214    18.954 16.985 49.297 1.00 32.71
        ATOM   92 N   GLU  215    17.700 18.018 47.736 1.00 35.01
        ATOM   93 CA  GLU  215    18.702 19.046 47.471 1.00 36.86
  45    ATOM   94 CB  GLU  215    18.274 19.977 46.319 1.00 38.74
        ATOM   95 CG  GLU  215    18.045 19.310 44.962 1.00 42.50
        ATOM   96 CD  GLU  215    17.655 20.307 43.862 1.00 44.43
        ATOM   97 OE1 GLU  215    17.034 21.350 44.174 1.00 44.44
        ATOM   98 OE2 GLU  215    17.957 20.039 42.674 1.00 46.05
  50    ATOM   99 C   GLU  215    18.881 19.886 48.735 1.00 36.72
        ATOM  100 O   GLU  215    19.996 20.278 49.082 1.00 37.76
        ATOM  101 N   MET  216    17.779 20.159 49.430 1.00 35.08
        ATOM  102 CA  MET  216    17.814 20.970 50.644 1.00 34.20
        ATOM  103 CB  MET  216    16.393 21.402 51.018 1.00 32.09
  55    ATOM  104 CG  MET  216    15.820 22.514 50.188 1.00 31.14
        ATOM  105 SD  MET  216    14.067 22.656 50.591 1.00 29.63
        ATOM  106 CE  MET  216    14.187 23.383 52.223 1.00 30.33
        ATOM  107 C   MET  216    18.447 20.309 51.868 1.00 33.78
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        ATOM  108 O   MET 216     18.955 20.998 52.755 1.00 32.43
        ATOM  109 N   GLU 217     18.381 18.982 51.923 1.00 34.02
        ATOM  110 CA  GLU 217     18.908 18.212 53.046 1.00 35.35
        ATOM  111 CB  GLU 217     18.470 16.745 52.919 1.00 33.44
  5     ATOM  112 CG  GLU 217     18.729 15.871 54.148 1.00 32.91
        ATOM  113 CD  GLU 217     17.999 16.372 55.389 1.00 32.03
        ATOM  114 OE1 GLU 217     17.001 17.104 55.242 1.00 33.02
        ATOM  115 OE2 GLU 217     18.419 16.032 56.511 1.00 34.58
        ATOM  116 C   GLU 217     20.421 18.293 53.105 1.00 37.01
  10    ATOM  117 O   GLU 217     21.006 18.276 54.190 1.00 37.08
        ATOM  118 N   SER 218     21.036 18.406 51.928 1.00 39.66
        ATOM  119 CA  SER 218     22.491 18.476 51.795 1.00 42.68
        ATOM  120 CB  SER 218     22.913 18.001 50.408 1.00 43.25
        ATOM  121 OG  SER 218     22.571 16.640 50.214 1.00 46.19
  15    ATOM  122 C   SER 218     23.083 19.856 52.027 1.00 44.17
        ATOM  123 O   SER 218     24.250 19.978 52.395 1.00 43.66
        ATOM  124 N   LEU 219     22.291 20.895 51.797 1.00 46.04
        ATOM  125 CA  LEU 219     22.773 22.254 51.982 1.00 48.34
        ATOM  126 CB  LEU 219     21.706 23.265 51.556 1.00 49.36
  20    ATOM  127 CG  LEU 219     21.670 23.631 50.072 1.00 50.71
        ATOM  128 CD1 LEU 219     21.879 22.395 49.219 1.00 51.07
        ATOM  129 CD2 LEU 219     20.341 24.307 49.760 1.00 51.61
        ATOM  130 C   LEU 219     23.183 22.530 53.416 1.00 49.65
        ATOM  131 O   LEU 219     22.501 22.140 54.363 1.00 49.02
  25    ATOM  132 N   VAL 220     24.318 23.205 53.552 1.00 51.55
        ATOM  133 CA  VAL 220     24.868 23.592 54.843 1.00 53.29
        ATOM  134 CB  VAL 220     26.250 22.945 55.085 1.00 52.35
        ATOM  135 CG1 VAL 220     26.774 23.341 56.456 1.00 51.60
        ATOM  136 CG2 VAL 220     26.142 21.426 54.965 1.00 50.84
  30    ATOM  137 C   VAL 220     25.030 25.106 54.770 1.00 55.56
        ATOM  138 O   VAL 220     25.929 25.613 54.097 1.00 56.16
        ATOM  139 N   ALA 221     24.147 25.823 55.450 1.00 57.83
        ATOM  140 CA  ALA 221     24.190 27.278 55.428 1.00 60.51
        ATOM  141 CB  ALA 221     22.782 27.845 55.601 1.00 60.73
  35    ATOM  142 C   ALA 221     25.108 27.838 56.499 1.00 61.87
        ATOM  143 O   ALA 221     25.475 27.143 57.452 1.00 62.13
        ATOM  144 N   ALA 222     25.490 29.100 56.326 1.00 62.85
        ATOM  145 CA  ALA 222     26.345 29.756 57.295 1.00 63.37
        ATOM  146 CB  ALA 222     26.612 31.196 56.871 1.00 63.59
  40    ATOM  147 C   ALA 222     25.564 29.719 58.601 1.00 63.51
        ATOM  148 O   ALA 222     24.422 30.176 58.659 1.00 63.95
        ATOM  149 N   ALA 223     26.173 29.150 59.636 1.00 63.63
        ATOM  150 CA  ALA 223     25.532 29.044 60.939 1.00 63.10
        ATOM  151 CB  ALA 223     26.558 28.627 61.984 1.00 63.64
  45    ATOM  152 C   ALA 223     24.874 30.365 61.339 1.00 62.58
        ATOM  153 O   ALA 223     25.557 31.333 61.678 1.00 63.33
        ATOM  154 N   ALA 224     23.544 30.399 61.290 1.00 61.31
        ATOM  155 CA  ALA 224     22.789 31.599 61.644 1.00 59.25
        ATOM  156 CB  ALA 224     21.323 31.440 61.220 1.00 58.51
  50    ATOM  157 C   ALA 224     22.878 31.880 63.143 1.00 58.07
        ATOM  158 O   ALA 224     22.988 30.943 63.939 1.00 58.18
        ATOM  159 N   GLU 225     22.844 33.159 63.528 1.00 56.07
        ATOM  160 CA  GLU 225     22.909 33.507 64.950 1.00 54.05
        ATOM  161 CB  GLU 225     22.498 34.969 65.221 1.00 54.53
  55    ATOM  162 CG  GLU 225     22.700 35.401 66.703 1.00 55.83
        ATOM  163 CD  GLU 225     21.439 35.872 67.407 1.00 56.62
        ATOM  164 OE1 GLU 225     21.407 35.822 68.663 1.00 57.35
        ATOM  165 OE2 GLU 225     20.464 36.314 66.743 1.00 57.42
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      ATOM  166 C   GLU  225     21.901 32.594 65.611 1.00 52.71
      ATOM  167 O   GLU  225     20.737 32.557 65.201 1.00 52.66
      ATOM  168 N   GLU  226     22.334 31.840 66.612 1.00 50.26
      ATOM  169 CA  GLU  226     21.391 30.960 67.256 1.00 47.92
  5   ATOM  170 CB  GLU  226     21.858 29.513 67.196 1.00 49.61
      ATOM  171 CG  GLU  226     20.778 28.525 67.641 1.00 49.78
      ATOM  172 CD  GLU  226     19.333 28.959 67.359 1.00 51.91
      ATOM  173 OE1 GLU  226     18.452 28.312 67.956 1.00 50.08
      ATOM  174 OE2 GLU  226     19.039 29.909 66.543 1.00 51.77
 10   ATOM  175 C   GLU  226     21.015 31.344 68.670 1.00 46.28
      ATOM  176 O   GLU  226     21.839 31.794 69.476 1.00 47.17
      ATOM  177 N   PHE  227     19.733 31.155 68.942 1.00 41.52
      ATOM  178 CA  PHE  227     19.138 31.503 70.206 1.00 38.73
      ATOM  179 CB  PHE  227     17.723 32.022 69.963 1.00 40.03
 15   ATOM  180 CG  PHE  227     17.640 33.061 68.876 1.00 40.91
      ATOM  181 CD1 PHE  227     17.775 32.703 67.542 1.00 40.72
      ATOM  182 CD2 PHE  227     17.464 34.402 69.192 1.00 42.62
      ATOM  183 CE1 PHE  227     17.739 33.661 66.535 1.00 42.04
      ATOM  184 CE2 PHE  227     17.426 35.374 68.188 1.00 42.27
 20   ATOM  185 CZ  PHE  227     17.564 34.996 66.857 1.00 42.02
      ATOM  186 C   PHE  227     19.119 30.339 71.174 1.00 34.83
      ATOM  187 O   PHE  227     19.218 29.178 70.778 1.00 34.52
      ATOM  188 N   GLN  228     18.982 30.687 72.445 1.00 33.69
      ATOM  189 CA  GLN  228     18.979 29.735 73.540 1.00 32.01
 25   ATOM  190 CB  GLN  228     19.290 30.468 74.847 1.00 34.80
      ATOM  191 CG  GLN  228     20.680 31.080 74.935 1.00 39.39
      ATOM  192 CD  GLN  228     21.768 30.029 74.916 1.00 40.63
      ATOM  193 OE1 GLN  228     22.117 29.504 73.860 1.00 44.27
      ATOM  194 NE2 GLN  228     22.301 29.706 76.093 1.00 42.65
 30   ATOM  195 C   GLN  228     17.678 28.974 73.736 1.00 28.92
      ATOM  196 O   GLN  228     17.035 29.174 74.750 1.00 28.29
      ATOM  197 N   PHE  229     17.283 28.120 72.794 1.00 28.04
      ATOM  198 CA  PHE  229     16.056 27.340 72.996 1.00 25.30
      ATOM  199 CB  PHE  229     15.767 26.411 71.821 1.00 27.02
 35   ATOM  200 CG  PHE  229     15.066 27.055 70.680 1.00 28.71
      ATOM  201 CD1 PHE  229     15.599 28.170 70.052 1.00 28.96
      ATOM  202 CD2 PHE  229     13.903 26.480 70.173 1.00 30.61
      ATOM  203 CE1 PHE  229     14.991 28.708 68.918 1.00 29.32
      ATOM  204 CE2 PHE  229     13.284 26.998 69.046 1.00 31.44
 40   ATOM  205 CZ  PHE  229     13.829 28.117 68.412 1.00 31.43
      ATOM  206 C   PHE  229     16.276 26.434 74.195 1.00 23.81
      ATOM  207 O   PHE  229     15.385 26.202 75.014 1.00 22.15
      ATOM  208 N   LEU  230     17.487 25.899 74.263 1.00 20.44
      ATOM  209 CA  LEU  230     17.848 24.964 75.302 1.00 21.42
 45   ATOM  210 CB  LEU  230     18.255 23.631 74.650 1.00 20.34
      ATOM  211 CG  LEU  230     17.191 22.855 73.834 1.00 22.70
      ATOM  212 CD1 LEU  230     17.860 21.762 73.013 1.00 23.14
      ATOM  213 CD2 LEU  230     16.130 22.252 74.773 1.00 21.55
      ATOM  214 C   LEU  230     19.017 25.540 76.094 1.00 20.71
 50   ATOM  215 O   LEU  230     19.977 26.038 75.524 1.00 20.61
      ATOM  216 N   ARG  231     18.931 25.467 77.411 1.00 20.48
      ATOM  217 CA  ARG  231     20.018 25.997 78.211 1.00 20.62
      ATOM  218 CB  ARG  231     20.023 27.525 78.176 1.00 20.50
      ATOM  219 CG  ARG  231     18.907 28.184 79.017 1.00 24.52
 55   ATOM  220 CD  ARG  231     17.560 28.025 78.342 1.00 27.62
      ATOM  221 NE  ARG  231     16.465 28.674 79.060 1.00 28.14
      ATOM  222 CZ  ARG  231     15.846 28.165 80.118 1.00 28.35
      ATOM  223 NH1 ARG  231     16.208 26.986 80.598 1.00 27.27
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     ATOM   224 NH2 ARG  231    14.856 28.835 80.692 1.00 28.94
     ATOM   225 C   ARG  231    19.957 25.585 79.663 1.00 20.62
     ATOM   226 O   ARG  231    18.884 25.350 80.219 1.00 20.08
     ATOM   227 N   VAL  232    21.138 25.549 80.265 1.00 20.70
 5   ATOM   228 CA  VAL  232    21.276 25.244 81.684 1.00 23.23
     ATOM   229 CB  VAL  232    22.596 24.499 81.961 1.00 24.57
     ATOM   230 CG1 VAL  232    22.800 24.335 83.460 1.00 24.88
     ATOM   231 CG2 VAL  232    22.565 23.135 81.289 1.00 23.34
     ATOM   232 C   VAL  232    21.306 26.619 82.359 1.00 25.86
10   ATOM   233 O   VAL  232    22.284 27.349 82.225 1.00 29.87
     ATOM   234 N   GLY  233    20.232 26.960 83.062 1.00 24.64
     ATOM   235 CA  GLY  233    20.137 28.249 83.730 1.00 26.40
     ATOM   236 C   GLY  233    20.170 28.129 85.240 1.00 27.72
     ATOM   237 O   GLY  233    20.449 27.041 85.755 1.00 26.07
15   ATOM   238 N   PRO  234    19.863 29.206 85.980 1.00 28.00
     ATOM   239 CD  PRO  234    19.340 30.507 85.515 1.00 30.45
     ATOM   240 CA  PRO  234    19.886 29.158 87.447 1.00 28.48
     ATOM   241 CB  PRO  234    19.772 30.627 87.833 1.00 30.42
     ATOM   242 CG  PRO  234    18.804 31.123 86.802 1.00 32.04
20   ATOM   243 C   PRO  234    18.752 28.323 88.037 1.00 27.91
     ATOM   244 O   PRO  234    18.781 27.975 89.229 1.00 28.03
     ATOM   245 N   ASP  235    17.757 27.996 87.210 1.00 26.13
     ATOM   246 CA  ASP  235    16.636 27.186 87.680 1.00 23.93
     ATOM   247 CB  ASP  235    15.333 27.686 87.064 1.00 28.77
25   ATOM   248 CG  ASP  235    15.405 27.820 85.544 1.00 31.24
     ATOM   249 OD1 ASP  235    16.519 27.836 84.964 1.00 32.56
     ATOM   250 OD2 ASP  235    14.327 27.922 84.919 1.00 34.70
     ATOM   251 C   ASP  235    16.828 25.700 87.362 1.00 20.99
     ATOM   252 O   ASP  235    16.019 24.881 87.751 1.00 19.94
30   ATOM   253 N   SER  236    17.914 25.369 86.666 0.50 20.63    AC1
     ATOM   254 CA  SER  236    18.208 23.979 86.280 0.50 20.15    AC1
     ATOM   255 CB  SER  236    19.196 23.969 85.111 0.50 19.44    AC1
     ATOM   256 OG  SER  236    18.708 24.734 84.013 0.50 19.16    AC1
     ATOM   257 C   SER  236    18.787 23.137 87.425 0.50 21.81    AC1
35   ATOM   258 O   SER  236    19.849 23.457 87.946 0.50 20.58    AC1
     ATOM   259 N   ASN  237    18.125 22.037 87.782 1.00 21.94
     ATOM   260 CA  ASN  237    18.621 21.202 88.886 1.00 25.34
     ATOM   261 CB  ASN  237    17.498 20.331 89.450 1.00 30.84
     ATOM   262 CG  ASN  237    17.020 19.301 88.472 1.00 34.04
40   ATOM   263 OD1 ASN  237    17.786 18.838 87.623 1.00 39.37
     ATOM   264 ND2 ASN  237    15.748 18.913 88.588 1.00 39.05
     ATOM   265 C   ASN  237    19.843 20.325 88.581 1.00 26.93
     ATOM   266 O   ASN  237    20.180 19.405 89.339 1.00 32.05
     ATOM   267 N   VAL  238    20.537 20.621 87.503 1.00 23.03
45   ATOM   268 CA  VAL  238    21.713 19.862 87.114 1.00 20.81
     ATOM   269 CB  VAL  238    22.096 20.241 85.663 1.00 20.25
     ATOM   270 CG1 VAL  238    23.336 19.495 85.207 1.00 19.20
     ATOM   271 CG2 VAL  238    20.919 19.922 84.741 1.00 20.14
     ATOM   272 C   VAL  238    22.844 20.185 88.106 1.00 20.62
50   ATOM   273 O   VAL  238    23.147 21.343 88.363 1.00 18.94
     ATOM   274 N   PRO  239    23.428 19.153 88.719 1.00 20.32
     ATOM   275 CD  PRO  239    23.144 17.726 88.541 1.00 20.40
     ATOM   276 CA  PRO  239    24.515 19.328 89.688 1.00 21.49
     ATOM   277 CB  PRO  239    24.911 17.892 90.023 1.00 22.13
55   ATOM   278 CG  PRO  239    23.696 17.174 89.847 1.00 20.51
     ATOM   279 C   PRO  239    25.663 20.039 89.023 1.00 24.59
     ATOM   280 O   PRO  239    25.924 19.804 87.847 1.00 23.65
     ATOM   281 N   PRO  240    26.388 20.879 89.777 1.00 24.92
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	ATOM	282	CD	PRO	240	26.142	21.311	91.167	1.00 26.02	
	ATOM	283	CA	PRO	240	27.524	21.603	89.202	1.00 26.88	
	ATOM	284	CB	PRO	240	28.222	22.161	90.438	1.00 26.73	
	ATOM	285	CG	PRO	240	27.039	22.543	91.299	1.00 29.18	
5	ATOM	286	C	PRO	240	28.434	20.733	88.363	1.00 26.35	
	ATOM	287	O	PRO	240	28.847	21.125	87.259	1.00 27.72	
	ATOM	288	N	LYS	241	28.745	19.533	88.838	1.00 28.50	
	ATOM	289	CA	LYS	241	29.642	18.682	88.071	1.00 28.19	
	ATOM	290	CB	LYS	241	30.073	17.457	88.878	1.00 32.48	
10	ATOM	291	CG	LYS	241	28.970	16.508	89.292	1.00 34.64	
	ATOM	292	CD	LYS	241	29.627	15.241	89.832	1.00 37.47	
	ATOM	293	CE	LYS	241	28.627	14.162	90.157	1.00 39.69	
	ATOM	294	NZ	LYS	241	29.359	12.932	90.578	1.00 42.50	
	ATOM	295	C	LYS	241	29.144	18.233	86.700	1.00 27.86	
15	ATOM	296	O	LYS	241	29.935	17.790	85.868	1.00 27.57	
	ATOM	297	N	PHE	242	27.840	18.335	86.459	1.00 25.10	
	ATOM	298	CA	PHE	242	27.309	17.953	85.154	1.00 22.57	
	ATOM	299	CB	PHE	242	26.161	16.954	85.319	1.00 24.91	
	ATOM	300	CG	PHE	242	26.600	15.619	85.856	1.00 28.41	
20	ATOM	301	CD1	PHE	242	27.411	14.790	85.102	1.00 30.20	
	ATOM	302	CD2	PHE	242	26.194	15.191	87.108	1.00 28.96	
	ATOM	303	CE1	PHE	242	27.813	13.544	85.583	1.00 31.58	
	ATOM	304	CE2	PHE	242	26.594	13.943	87.596	1.00 30.20	
	ATOM	305	CZ	PHE	242	27.400	13.127	86.832	1.00 32.03	
25	ATOM	306	C	PHE	242	26.837	19.151	84.330	1.00 19.63	
	ATOM	307	O	PHE	242	26.386	18.991	83.190	1.00 20.79	
	ATOM	308	N	ARG	243	26.971	20.350	84.873	1.00 19.69	
	ATOM	309	CA	ARG	243	26.513	21.529	84.153	1.00 20.41	
	ATOM	310	CB	ARG	243	26.538	22.749	85.066	1.00 20.87	
30	ATOM	311	CG	ARG	243	25.523	22.602	86.208	1.00 23.08	
	ATOM	312	CD	ARG	243	25.562	23.759	87.130	1.00 26.38	
	ATOM	313	NE	ARG	243	24.725	24.856	86.687	1.00 27.91	
	ATOM	314	CZ	ARG	243	23.394	24.873	86.728	1.00 28.35	
	ATOM	315	NH1	ARG	243	22.697	23.825	87.192	1.00 26.91	
35	ATOM	316	NH2	ARG	243	22.764	25.975	86.343	1.00 28.11	
	ATOM	317	C	ARG	243	27.238	21.813	82.846	1.00 20.13	
	ATOM	318	O	ARG	243	26.596	22.114	81.836	1.00 19.71	
	ATOM	319	N	ALA	244	28.564	21.734	82.838	1.00 20.90	
	ATOM	320	CA	ALA	244	29.273	21.974	81.577	1.00 22.06	
40	ATOM	321	CB	ALA	244	30.773	21.896	81.796	1.00 21.20	
	ATOM	322	C	ALA	244	28.842	20.984	80.492	1.00 21.05	
	ATOM	323	O	ALA	244	28.527	21.365	79.366	1.00 21.57	
	ATOM	324	N	PRO	245	28.783	19.696	80.822	1.00 21.63	
	ATOM	325	CD	PRO	245	29.335	19.087	82.049	1.00 25.65	
45	ATOM	326	CA	PRO	245	28.377	18.672	79.861	1.00 22.28	
	ATOM	327	CB	PRO	245	28.516	17.380	80.666	1.00 24.91	
	ATOM	328	CG	PRO	245	29.614	17.694	81.605	1.00 25.26	
	ATOM	329	C	PRO	245	26.943	18.859	79.329	1.00 19.49	
	ATOM	330	O	PRO	245	26.691	18.778	78.118	1.00 21.31	
50	ATOM	331	N	VAL	246	26.013	19.123	80.230	1.00 20.18	
	ATOM	332	CA	VAL	246	24.624	19.294	79.805	1.00 18.44	
	ATOM	333	CB	VAL	246	23.693	19.269	81.028	1.00 18.35	
	ATOM	334	CG1	VAL	246	22.221	19.536	80.620	1.00 18.11	
	ATOM	335	CG2	VAL	246	23.766	17.845	81.678	1.00 17.69	
55	ATOM	336	C	VAL	246	24.501	20.568	78.968	1.00 18.23	
	ATOM	337	O	VAL	246	23.773	20.603	77.977	1.00 18.23	
	ATOM	338	N	SER	247	25.234	21.609	79.351	0.50 20.08	AC1
	ATOM	339	CA	SER	247	25.198	22.858	78.599	0.50 21.19	AC1

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     ATOM   340 CB  SER 247    26.058 23.910 79.289 0.50 21.37   AC1
     ATOM   341 OG  SER 247    25.484 24.292 80.517 0.50 23.67   AC1
     ATOM   342 C   SER 247    25.712 22.621 77.189 0.50 21.32   AC1
     ATOM   343 O   SER 247    25.180 23.161 76.217 0.50 21.62   AC1
 5   ATOM   344 N   SER 248    26.756 21.811 77.076 1.00 20.43
     ATOM   345 CA  SER 248    27.322 21.502 75.766 1.00 21.62
     ATOM   346 CB  SER 248    28.541 20.594 75.916 1.00 24.31
     ATOM   347 OG  SER 248    29.660 21.350 76.354 1.00 24.89
     ATOM   348 C   SER 248    26.271 20.800 74.903 1.00 22.36
10   ATOM   349 O   SER 248    26.158 21.061 73.697 1.00 22.32
     ATOM   350 N   LEU 249    25.513 19.895 75.519 1.00 22.35
     ATOM   351 CA  LEU 249    24.462 19.185 74.791 1.00 22.28
     ATOM   352 CB  LEU 249    23.904 18.046 75.668 1.00 22.23
     ATOM   353 CG  LEU 249    24.970 16.972 75.954 1.00 25.52
15   ATOM   354 CD1 LEU 249    24.441 15.919 76.922 1.00 26.39
     ATOM   355 CD2 LEU 249    25.398 16.341 74.643 1.00 27.01
     ATOM   356 C   LEU 249    23.358 20.152 74.352 1.00 21.63
     ATOM   357 O   LEU 249    22.822 20.039 73.231 1.00 19.99
     ATOM   358 N   CYS 250    23.012 21.102 75.217 1.00 21.10
20   ATOM   359 CA  CYS 250    21.995 22.098 74.856 1.00 21.22
     ATOM   360 CB  CYS 250    21.701 23.044 76.019 1.00 20.65
     ATOM   361 SG  CYS 250    20.853 22.249 77.396 1.00 22.08
     ATOM   362 C   CYS 250    22.471 22.932 73.684 1.00 22.49
     ATOM   363 O   CYS 250    21.687 23.302 72.828 1.00 23.08
25   ATOM   364 N   GLN 251    23.765 23.239 73.656 1.00 22.61
     ATOM   365 CA  GLN 251    24.313 24.064 72.577 1.00 24.50
     ATOM   366 CB  GLN 251    25.738 24.482 72.925 1.00 26.13
     ATOM   367 CG  GLN 251    25.827 25.428 74.123 1.00 31.89
     ATOM   368 CD  GLN 251    27.270 25.602 74.609 1.00 36.32
30   ATOM   369 OE1 GLN 251    28.146 26.020 73.846 1.00 38.70
     ATOM   370 NE2 GLN 251    27.520 25.275 75.883 1.00 36.33
     ATOM   371 C   GLN 251    24.290 23.309 71.255 1.00 23.96
     ATOM   372 O   GLN 251    24.080 23.899 70.200 1.00 25.04
     ATOM   373 N   ILE 252    24.506 21.998 71.323 1.00 23.74
35   ATOM   374 CA  ILE 252    24.475 21.143 70.140 1.00 24.05
     ATOM   375 CB  ILE 252    24.877 19.690 70.493 1.00 25.71
     ATOM   376 CG2 ILE 252    24.385 18.727 69.419 1.00 25.12
     ATOM   377 CG1 ILE 252    26.405 19.596 70.658 1.00 26.17
     ATOM   378 CD1 ILE 252    26.874 18.335 71.359 1.00 27.45
40   ATOM   379 C   ILE 252    23.032 21.183 69.642 1.00 25.30
     ATOM   380 O   ILE 252    22.760 21.312 68.448 1.00 25.88
     ATOM   381 N   GLY 253    22.101 21.105 70.580 1.00 25.76
     ATOM   382 CA  GLY 253    20.698 21.167 70.213 1.00 24.72
     ATOM   383 C   GLY 253    20.327 22.497 69.573 1.00 24.98
45   ATOM   384 O   GLY 253    19.611 22.527 68.561 1.00 24.56
     ATOM   385 N   ASN 254    20.779 23.600 70.165 1.00 23.66
     ATOM   386 CA  ASN 254    20.483 24.929 69.642 1.00 24.18
     ATOM   387 CB  ASN 254    21.063 25.999 70.566 1.00 23.04
     ATOM   388 CG  ASN 254    20.336 26.061 71.884 1.00 24.90
50   ATOM   389 OD1 ASN 254    19.147 25.729 71.954 1.00 22.87
     ATOM   390 ND2 ASN 254    21.020 26.511 72.934 1.00 25.39
     ATOM   391 C   ASN 254    20.990 25.142 68.215 1.00 25.59
     ATOM   392 O   ASN 254    20.349 25.832 67.418 1.00 25.49
     ATOM   393 N   LYS 255    22.154 24.575 67.915 1.00 24.87
55   ATOM   394 CA  LYS 255    22.718 24.669 66.572 1.00 26.12
     ATOM   395 CB  LYS 255    24.121 24.061 66.518 1.00 29.40
     ATOM   396 CG  LYS 255    25.162 24.983 67.112 1.00 33.68
     ATOM   397 CD  LYS 255    26.481 24.293 67.392 1.00 34.86
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        ATOM   398 CE  LYS  255     27.280 24.027 66.150 1.00 35.57
        ATOM   399 NZ  LYS  255     28.719 23.853 66.527 1.00 33.75
        ATOM   400 C   LYS  255     21.816 23.924 65.608 1.00 26.04
        ATOM   401 O   LYS  255     21.539 24.415 64.507 1.00 25.57
   5    ATOM   402 N   GLN  256     21.358 22.741 66.009 1.00 24.02
        ATOM   403 CA  GLN  256     20.498 21.967 65.121 1.00 23.89
        ATOM   404 CB  GLN  256     20.325 20.546 65.658 1.00 25.47
        ATOM   405 CG  GLN  256     21.676 19.880 65.887 1.00 28.63
        ATOM   406 CD  GLN  256     21.565 18.517 66.534 1.00 30.93
  10    ATOM   407 OE1 GLN  256     20.710 18.301 67.387 1.00 32.63
        ATOM   408 NE2 GLN  256     22.439 17.599 66.149 1.00 30.18
        ATOM   409 C   GLN  256     19.156 22.658 64.915 1.00 24.45
        ATOM   410 O   GLN  256     18.596 22.598 63.828 1.00 24.20
        ATOM   411 N   ILE  257     18.662 23.338 65.942 1.00 23.21
  15    ATOM   412 CA  ILE  257     17.390 24.059 65.816 1.00 22.41
        ATOM   413 CB  ILE  257     16.895 24.535 67.180 1.00 20.26
        ATOM   414 CG2 ILE  257     15.636 25.401 67.021 1.00 21.15
        ATOM   415 CG1 ILE  257     16.607 23.298 68.039 1.00 22.12
        ATOM   416 CD1 ILE  257     16.309 23.620 69.517 1.00 21.36
  20    ATOM   417 C   ILE  257     17.558 25.253 64.877 1.00 23.91
        ATOM   418 O   ILE  257     16.677 25.544 64.060 1.00 21.49
        ATOM   419 N   ALA  258     18.684 25.949 64.994 1.00 23.86
        ATOM   420 CA  ALA  258     18.939 27.081 64.103 1.00 25.37
        ATOM   421 CB  ALA  258     20.313 27.705 64.416 1.00 26.26
  25    ATOM   422 C   ALA  258     18.906 26.588 62.656 1.00 25.01
        ATOM   423 O   ALA  258     18.306 27.238 61.783 1.00 25.91
        ATOM   424 N   ALA  259     19.555 25.450 62.403 1.00 23.72
        ATOM   425 CA  ALA  259     19.602 24.865 61.063 1.00 24.51
        ATOM   426 CB  ALA  259     20.442 23.613 61.058 1.00 24.62
  30    ATOM   427 C   ALA  259     18.187 24.525 60.623 1.00 24.36
        ATOM   428 O   ALA  259     17.846 24.693 59.464 1.00 23.27
        ATOM   429 N   LEU  260     17.374 24.015 61.544 1.00 23.02
        ATOM   430 CA  LEU  260     15.986 23.685 61.188 1.00 24.75
        ATOM   431 CB  LEU  260     15.237 23.070 62.366 1.00 26.22
  35    ATOM   432 CG  LEU  260     15.550 21.633 62.742 1.00 31.27
        ATOM   433 CD1 LEU  260     14.906 21.342 64.082 1.00 32.20
        ATOM   434 CD2 LEU  260     15.054 20.679 61.658 1.00 33.32
        ATOM   435 C   LEU  260     15.214 24.902 60.750 1.00 25.40
        ATOM   436 O   LEU  260     14.391 24.821 59.834 1.00 23.40
  40    ATOM   437 N   VAL  261     15.439 26.031 61.419 1.00 25.21
        ATOM   438 CA  VAL  261     14.735 27.247 61.055 1.00 26.95
        ATOM   439 CB  VAL  261     15.050 28.411 62.036 1.00 25.46
        ATOM   440 CG1 VAL  261     14.386 29.700 61.544 1.00 27.40
        ATOM   441 CG2 VAL  261     14.520 28.075 63.434 1.00 27.42
  45    ATOM   442 C   VAL  261     15.104 27.671 59.640 1.00 26.53
        ATOM   443 O   VAL  261     14.232 28.035 58.850 1.00 25.34
        ATOM   444 N   VAL  262     16.396 27.611 59.320 1.00 27.29
        ATOM   445 CA  VAL  262     16.874 27.995 57.993 1.00 28.11
        ATOM   446 CB  VAL  262     18.430 27.910 57.905 1.00 30.08
  50    ATOM   447 CG1 VAL  262     18.883 27.872 56.441 1.00 33.75
        ATOM   448 CG2 VAL  262     19.051 29.104 58.606 1.00 32.97
        ATOM   449 C   VAL  262     16.267 27.075 56.939 1.00 26.73
        ATOM   450 O   VAL  262     15.909 27.511 55.840 1.00 26.28
        ATOM   451 N   TRP  263     16.177 25.794 57.286 1.00 24.38
  55    ATOM   452 CA  TRP  263     15.623 24.775 56.402 1.00 25.26
        ATOM   453 CB  TRP  263     15.831 23.406 57.052 1.00 23.10
        ATOM   454 CG  TRP  263     15.102 22.286 56.409 1.00 24.27
        ATOM   455 CD2 TRP  263     13.881 21.697 56.873 1.00 24.86
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      ATOM   456 CE2 TRP  263    13.536 20.681 55.962 1.00 25.93
      ATOM   457 CE3 TRP  263    13.051 21.936 57.974 1.00 24.53
      ATOM   458 CD1 TRP  263    15.441 21.624 55.267 1.00 24.80
      ATOM   459 NE1 TRP  263    14.501 20.655 54.990 1.00 27.16
  5   ATOM   460 CZ2 TRP  263    12.391 19.895 56.115 1.00 26.26
      ATOM   461 CZ3 TRP  263    11.911 21.151 58.132 1.00 23.32
      ATOM   462 CH2 TRP  263    11.598 20.144 57.204 1.00 23.73
      ATOM   463 C   TRP  263    14.125 25.047 56.175 1.00 24.66
      ATOM   464 O   TRP  263    13.645 25.081 55.037 1.00 25.81
 10   ATOM   465 N   ALA  264    13.391 25.278 57.252 1.00 24.56
      ATOM   466 CA  ALA  264    11.949 25.506 57.103 1.00 25.04
      ATOM   467 CB  ALA  264    11.304 25.733 58.464 1.00 26.00
      ATOM   468 C   ALA  264    11.675 26.701 56.205 1.00 27.22
      ATOM   469 O   ALA  264    10.838 26.640 55.293 1.00 24.71
 15   ATOM   470 N   ARG  265    12.372 27.794 56.489 1.00 28.16
      ATOM   471 CA  ARG  265    12.227 29.024 55.724 1.00 32.11
      ATOM   472 CB  ARG  265    13.250 30.066 56.218 1.00 33.47
      ATOM   473 CG  ARG  265    13.155 31.408 55.520 1.00 36.25
      ATOM   474 CD  ARG  265    14.169 32.397 56.078 1.00 39.06
 20   ATOM   475 NE  ARG  265    15.545 31.972 55.823 1.00 42.06
      ATOM   476 CZ  ARG  265    16.609 32.534 56.391 1.00 43.94
      ATOM   477 NH1 ARG  265    16.447 33.541 57.244 1.00 44.49
      ATOM   478 NH2 ARG  265    17.827 32.092 56.110 1.00 43.52
      ATOM   479 C   ARG  265    12.424 28.767 54.225 1.00 32.76
 25   ATOM   480 O   ARG  265    11.843 29.460 53.392 1.00 35.61
      ATOM   481 N   ASP  266    13.227 27.771 53.872 1.00 33.71
      ATOM   482 CA  ASP  266    13.465 27.492 52.466 1.00 34.17
      ATOM   483 CB  ASP  266    14.931 27.106 52.236 1.00 37.32
      ATOM   484 CG  ASP  266    15.879 28.293 52.374 1.00 40.62
 30   ATOM   485 OD1 ASP  266    15.556 29.392 51.866 1.00 40.66
      ATOM   486 OD2 ASP  266    16.959 28.128 52.985 1.00 43.94
      ATOM   487 C   ASP  266    12.544 26.447 51.833 1.00 33.93
      ATOM   488 O   ASP  266    12.664 26.156 50.646 1.00 32.38
      ATOM   489 N   ILE  267    11.640 25.869 52.619 1.00 32.18
 35   ATOM   490 CA  ILE  267    10.694 24.897 52.077 1.00 30.21
      ATOM   491 CB  ILE  267     9.820 24.279 53.210 1.00 29.16
      ATOM   492 CG2 ILE  267     8.586 23.588 52.620 1.00 31.21
      ATOM   493 CG1 ILE  267    10.643 23.291 54.038 1.00 29.01
      ATOM   494 CD1 ILE  267    11.069 22.051 53.278 1.00 28.89
 40   ATOM   495 C   ILE  267     9.800 25.670 51.093 1.00 30.06
      ATOM   496 O   ILE  267     9.256 26.715 51.421 1.00 29.41
      ATOM   497 N   PRO  268     9.653 25.164 49.862 1.00 31.41
      ATOM   498 CD  PRO  268    10.216 23.921 49.300 1.00 31.06
      ATOM   499 CA  PRO  268     8.813 25.857 48.879 1.00 31.62
 45   ATOM   500 CB  PRO  268     8.686 24.830 47.755 1.00 31.63
      ATOM   501 CG  PRO  268    10.012 24.126 47.811 1.00 34.16
      ATOM   502 C   PRO  268     7.459 26.286 49.444 1.00 31.83
      ATOM   503 O   PRO  268     6.762 25.483 50.051 1.00 31.61
      ATOM   504 N   HIS  269     7.128 27.566 49.267 1.00 31.08
 50   ATOM   505 CA  HIS  269     5.867 28.164 49.715 1.00 31.47
      ATOM   506 CB  HIS  269     4.677 27.277 49.300 1.00 33.82
      ATOM   507 CG  HIS  269     4.710 26.845 47.865 1.00 36.44
      ATOM   508 CD2 HIS  269     4.694 25.611 47.305 1.00 37.13
      ATOM   509 ND1 HIS  269     4.734 27.740 46.816 1.00 39.48
 55   ATOM   510 CE1 HIS  269     4.731 27.078 45.672 1.00 37.91
      ATOM   511 NE2 HIS  269     4.706 25.785 45.941 1.00 39.31
      ATOM   512 C   HIS  269     5.745 28.465 51.210 1.00 30.01
      ATOM   513 O   HIS  269     4.796 29.133 51.638 1.00 28.74
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        ATOM   514 N   PHE  270    6.693 27.994 52.012 1.00 28.26
        ATOM   515 CA  PHE  270    6.607 28.222 53.454 1.00 27.87
        ATOM   516 CB  PHE  270    7.728 27.468 54.178 1.00 26.66
        ATOM   517 CG  PHE  270    7.661 27.563 55.684 1.00 24.18
   5    ATOM   518 CD1 PHE  270    6.867 26.683 56.415 1.00 24.15
        ATOM   519 CD2 PHE  270    8.385 28.536 56.372 1.00 26.34
        ATOM   520 CE1 PHE  270    6.792 26.775 57.822 1.00 22.45
        ATOM   521 CE2 PHE  270    8.316 28.637 57.778 1.00 24.45
        ATOM   522 CZ  PHE  270    7.516 27.754 58.494 1.00 23.03
  10    ATOM   523 C   PHE  270    6.650 29.707 53.811 1.00 28.65
        ATOM   524 O   PHE  270    5.866 30.175 54.634 1.00 29.19
        ATOM   525 N   SER  271    7.558 30.448 53.184 0.50 29.83   AC1
        ATOM   526 CA  SER  271    7.676 31.876 53.463 0.50 31.34   AC1
        ATOM   527 CB  SER  271    8.959 32.432 52.839 0.50 31.74   AC1
  15    ATOM   528 OG  SER  271   10.104 31.869 53.460 0.50 31.64   AC1
        ATOM   529 C   SER  271    6.458 32.663 52.974 0.50 32.85   AC1
        ATOM   530 O   SER  271    6.301 33.839 53.296 0.50 33.99   AC1
        ATOM   531 N   GLN  272    5.599 32.009 52.197 1.00 33.79
        ATOM   532 CA  GLN  272    4.378 32.642 51.696 1.00 35.22
  20    ATOM   533 CB  GLN  272    3.910 31.928 50.423 1.00 39.02
        ATOM   534 CG  GLN  272    4.777 32.210 49.191 1.00 43.59
        ATOM   535 CD  GLN  272    4.608 31.169 48.086 1.00 45.89
        ATOM   536 OE1 GLN  272    3.488 30.794 47.727 1.00 47.68
        ATOM   537 NE2 GLN  272    5.729 30.703 47.534 1.00 48.15
  25    ATOM   538 C   GLN  272    3.255 32.633 52.742 1.00 35.20
        ATOM   539 O   GLN  272    2.288 33.397 52.648 1.00 33.55
        ATOM   540 N   LEU  273    3.383 31.756 53.736 1.00 33.18
        ATOM   541 CA  LEU  273    2.402 31.651 54.811 1.00 31.26
        ATOM   542 CB  LEU  273    2.695 30.398 55.653 1.00 30.14
  30    ATOM   543 CG  LEU  273    2.671 29.015 54.988 1.00 29.04
        ATOM   544 CD1 LEU  273    3.273 27.989 55.930 1.00 28.99
        ATOM   545 CD2 LEU  273    1.231 28.638 54.645 1.00 29.21
        ATOM   546 C   LEU  273    2.500 32.880 55.722 1.00 30.95
        ATOM   547 O   LEU  273    3.556 33.513 55.793 1.00 30.58
  35    ATOM   548 N   GLU  274    1.416 33.208 56.420 1.00 31.28
        ATOM   549 CA  GLU  274    1.435 34.332 57.355 1.00 32.85
        ATOM   550 CB  GLU  274    0.154 34.378 58.195 1.00 35.60
        ATOM   551 CG  GLU  274   -1.039 35.022 57.511 1.00 40.50
        ATOM   552 CD  GLU  274   -0.954 36.543 57.494 1.00 43.35
  40    ATOM   553 OE1 GLU  274   -1.788 37.171 56.807 1.00 44.88
        ATOM   554 OE2 GLU  274   -0.062 37.109 58.169 1.00 45.29
        ATOM   555 C   GLU  274    2.615 34.079 58.287 1.00 32.91
        ATOM   556 O   GLU  274    2.867 32.936 58.693 1.00 31.56
        ATOM   557 N   MET  275    3.331 35.136 58.632 1.00 31.54
  45    ATOM   558 CA  MET  275    4.483 35.010 59.507 1.00 31.78
        ATOM   559 CB  MET  275    5.094 36.392 59.748 1.00 34.73
        ATOM   560 CG  MET  275    6.288 36.403 60.673 1.00 37.61
        ATOM   561 SD  MET  275    7.574 35.262 60.158 1.00 39.49
        ATOM   562 CE  MET  275    7.940 35.869 58.496 1.00 39.54
  50    ATOM   563 C   MET  275    4.149 34.351 60.838 1.00 31.91
        ATOM   564 O   MET  275    4.885 33.474 61.305 1.00 31.90
        ATOM   565 N   GLU  276    3.052 34.764 61.458 1.00 31.07
        ATOM   566 CA  GLU  276    2.684 34.184 62.736 1.00 30.79
        ATOM   567 CB  GLU  276    1.499 34.938 63.341 1.00 35.06
  55    ATOM   568 CG  GLU  276    1.866 36.382 63.755 1.00 37.66
        ATOM   569 CD  GLU  276    3.043 36.434 64.731 1.00 40.34
        ATOM   570 OE1 GLU  276    2.978 35.751 65.774 1.00 41.45
        ATOM   571 OE2 GLU  276    4.034 37.157 64.464 1.00 42.59
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	ATOM	572	C	GLU	276	2.388	32.693	62.596	1.00	29.05
	ATOM	573	O	GLU	276	2.529	31.946	63.559	1.00	28.93
	ATOM	574	N	ASP	277	1.973	32.250	61.411	1.00	26.93
	ATOM	575	CA	ASP	277	1.716	30.817	61.223	1.00	24.95
5	ATOM	576	CB	ASP	277	0.817	30.565	60.005	1.00	26.30
	ATOM	577	CG	ASP	277	-0.656	30.768	60.320	1.00	26.04
	ATOM	578	OD1	ASP	277	-0.984	31.102	61.476	1.00	29.19
	ATOM	579	OD2	ASP	277	-1.492	30.596	59.410	1.00	26.42
	ATOM	580	C	ASP	277	3.056	30.089	61.069	1.00	25.34
10	ATOM	581	O	ASP	277	3.226	28.967	61.579	1.00	25.43
	ATOM	582	N	GLN	278	4.007	30.721	60.373	1.00	23.47
	ATOM	583	CA	GLN	278	5.338	30.132	60.203	1.00	23.93
	ATOM	584	CB	GLN	278	6.275	31.094	59.467	1.00	23.08
	ATOM	585	CG	GLN	278	5.931	31.265	57.999	1.00	26.36
15	ATOM	586	CD	GLN	278	6.858	32.238	57.324	1.00	26.00
	ATOM	587	OE1	GLN	278	8.075	32.122	57.439	1.00	26.10
	ATOM	588	NE2	GLN	278	6.293	33.210	56.609	1.00	28.94
	ATOM	589	C	GLN	278	5.917	29.850	61.588	1.00	22.78
	ATOM	590	O	GLN	278	6.445	28.765	61.857	1.00	20.87
20	ATOM	591	N	ILE	279	5.821	30.849	62.461	1.00	23.32
	ATOM	592	CA	ILE	279	6.322	30.719	63.825	1.00	22.80
	ATOM	593	CB	ILE	279	6.125	32.046	64.591	1.00	24.62
	ATOM	594	CG2	ILE	279	6.449	31.868	66.076	1.00	24.08
	ATOM	595	CG1	ILE	279	6.997	33.125	63.943	1.00	27.52
25	ATOM	596	CD1	ILE	279	6.728	34.543	64.464	1.00	27.69
	ATOM	597	C	ILE	279	5.638	29.560	64.573	1.00	22.81
	ATOM	598	O	ILE	279	6.294	28.758	65.215	1.00	23.50
	ATOM	599	N	LEU	280	4.318	29.463	64.498	1.00	20.16
	ATOM	600	CA	LEU	280	3.653	28.382	65.186	1.00	18.30
30	ATOM	601	CB	LEU	280	2.125	28.553	65.113	1.00	19.64
	ATOM	602	CG	LEU	280	1.589	29.739	65.931	1.00	22.60
	ATOM	603	CD1	LEU	280	0.093	29.931	65.623	1.00	24.59
	ATOM	604	CD2	LEU	280	1.759	29.496	67.399	1.00	25.05
	ATOM	605	C	LEU	280	4.045	27.028	64.653	1.00	17.14
35	ATOM	606	O	LEU	280	4.160	26.084	65.436	1.00	18.84
	ATOM	607	N	LEU	281	4.225	26.905	63.335	1.00	17.52
	ATOM	608	CA	LEU	281	4.586	25.591	62.773	1.00	19.05
	ATOM	609	CB	LEU	281	4.550	25.618	61.241	1.00	19.60
	ATOM	610	CG	LEU	281	3.167	25.782	60.595	1.00	21.40
40	ATOM	611	CD1	LEU	281	3.324	25.870	59.073	1.00	23.62
	ATOM	612	CD2	LEU	281	2.266	24.621	60.975	1.00	21.20
	ATOM	613	C	LEU	281	5.968	25.143	63.255	1.00	19.84
	ATOM	614	O	LEU	281	6.164	23.977	63.620	1.00	19.38
	ATOM	615	N	ILE	282	6.923	26.067	63.269	1.00	20.43
45	ATOM	616	CA	ILE	282	8.270	25.740	63.731	1.00	19.64
	ATOM	617	CB	ILE	282	9.274	26.881	63.361	1.00	20.44
	ATOM	618	CG2	ILE	282	10.619	26.706	64.102	1.00	20.04
	ATOM	619	CG1	ILE	282	9.486	26.873	61.839	1.00	20.45
	ATOM	620	CD1	ILE	282	10.278	28.076	61.323	1.00	22.03
50	ATOM	621	C	ILE	282	8.255	25.496	65.239	1.00	19.41
	ATOM	622	O	ILE	282	8.894	24.574	65.717	1.00	19.21
	ATOM	623	N	LYS	283	7.533	26.322	65.992	1.00	17.59
	ATOM	624	CA	LYS	283	7.480	26.148	67.446	1.00	19.01
	ATOM	625	CB	LYS	283	6.624	27.246	68.103	1.00	19.89
55	ATOM	626	CG	LYS	283	6.596	27.154	69.613	1.00	23.82
	ATOM	627	CD	LYS	283	5.948	28.388	70.243	1.00	26.99
	ATOM	628	CE	LYS	283	5.645	28.183	71.731	1.00	30.98
	ATOM	629	NZ	LYS	283	6.837	27.917	72.599	1.00	34.38

	ATOM	630	C	LYS	283	6.873	24.791	67.778	1.00	19.44
	ATOM	631	O	LYS	283	7.274	24.120	68.729	1.00	19.31
	ATOM	632	N	GLY	284	5.882	24.390	66.983	1.00	19.18
	ATOM	633	CA	GLY	284	5.240	23.124	67.254	1.00	18.56
5	ATOM	634	C	GLY	284	5.981	21.885	66.806	1.00	18.31
	ATOM	635	O	GLY	284	5.731	20.805	67.328	1.00	19.56
	ATOM	636	N	SER	285	6.941	22.024	65.895	1.00	18.65
	ATOM	637	CA	SER	285	7.633	20.844	65.384	1.00	17.51
	ATOM	638	CB	SER	285	7.453	20.755	63.870	1.00	19.70
10	ATOM	639	OG	SER	285	8.063	21.874	63.212	1.00	18.48
	ATOM	640	C	SER	285	9.136	20.728	65.663	1.00	15.25
	ATOM	641	O	SER	285	9.705	19.673	65.406	1.00	15.43
	ATOM	642	N	TRP	286	9.770	21.759	66.203	1.00	15.99
	ATOM	643	CA	TRP	286	11.221	21.642	66.395	1.00	16.28
15	ATOM	644	CB	TRP	286	11.812	22.920	67.007	1.00	17.10
	ATOM	645	CG	TRP	286	11.458	23.226	68.414	1.00	17.32
	ATOM	646	CD2	TRP	286	12.117	22.736	69.592	1.00	18.06
	ATOM	647	CE2	TRP	286	11.440	23.291	70.709	1.00	20.12
	ATOM	648	CE3	TRP	286	13.208	21.882	69.815	1.00	17.92
20	ATOM	649	CD1	TRP	286	10.445	24.033	68.850	1.00	18.61
	ATOM	650	NE1	TRP	286	10.427	24.076	70.227	1.00	18.32
	ATOM	651	CZ2	TRP	286	11.816	23.020	72.027	1.00	17.23
	ATOM	652	CZ3	TRP	286	13.580	21.608	71.136	1.00	18.42
	ATOM	653	CH2	TRP	286	12.889	22.172	72.219	1.00	19.75
25	ATOM	654	C	TRP	286	11.668	20.443	67.219	1.00	16.59
	ATOM	655	O	TRP	286	12.655	19.766	66.886	1.00	17.31
	ATOM	656	N	ASN	287	10.938	20.167	68.282	1.00	15.26
	ATOM	657	CA	ASN	287	11.301	19.059	69.157	1.00	14.41
	ATOM	658	CB	ASN	287	10.508	19.180	70.456	1.00	17.68
30	ATOM	659	CG	ASN	287	10.894	18.145	71.474	1.00	19.61
	ATOM	660	OD1	ASN	287	11.757	18.374	72.348	1.00	23.92
	ATOM	661	ND2	ASN	287	10.251	16.991	71.384	1.00	18.83
	ATOM	662	C	ASN	287	11.096	17.718	68.448	1.00	14.74
	ATOM	663	O	ASN	287	11.954	16.846	68.508	1.00	16.16
35	ATOM	664	N	GLU	288	9.966	17.555	67.752	1.00	15.22
	ATOM	665	CA	GLU	288	9.745	16.319	66.986	1.00	16.77
	ATOM	666	CB	GLU	288	8.367	16.358	66.288	1.00	17.55
	ATOM	667	CG	GLU	288	7.213	16.044	67.224	1.00	18.68
	ATOM	668	CD	GLU	288	5.868	16.134	66.548	1.00	23.02
40	ATOM	669	OE1	GLU	288	5.786	15.849	65.342	1.00	28.18
	ATOM	670	OE2	GLU	288	4.887	16.461	67.243	1.00	29.07
	ATOM	671	C	GLU	288	10.838	16.122	65.921	1.00	17.49
	ATOM	672	O	GLU	288	11.338	15.014	65.743	1.00	16.93
	ATOM	673	N	LEU	289	11.193	17.204	65.220	1.00	14.56
45	ATOM	674	CA	LEU	289	12.196	17.130	64.173	1.00	15.76
	ATOM	675	CB	LEU	289	12.248	18.451	63.390	1.00	14.77
	ATOM	676	CG	LEU	289	11.006	18.639	62.483	1.00	16.67
	ATOM	677	CD1	LEU	289	10.932	20.093	62.002	1.00	18.25
	ATOM	678	CD2	LEU	289	11.083	17.667	61.287	1.00	15.71
50	ATOM	679	C	LEU	289	13.555	16.784	64.752	1.00	16.05
	ATOM	680	O	LEU	289	14.301	16.022	64.138	1.00	16.56
	ATOM	681	N	LEU	290	13.884	17.312	65.929	1.00	16.37
	ATOM	682	CA	LEU	290	15.190	16.951	66.529	1.00	16.68
	ATOM	683	CB	LEU	290	15.477	17.734	67.809	1.00	17.02
55	ATOM	684	CG	LEU	290	15.786	19.219	67.684	1.00	22.29
	ATOM	685	CD1	LEU	290	16.294	19.726	69.046	1.00	23.74
	ATOM	686	CD2	LEU	290	16.865	19.454	66.604	1.00	25.08
	ATOM	687	C	LEU	290	15.229	15.471	66.868	1.00	16.18

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     ATOM  688 O  LEU  290    16.214 14.803 66.605 1.00 17.45
     ATOM  689 N  LEU  291    14.142 14.958 67.465 1.00 16.16
     ATOM  690 CA LEU  291    14.088 13.553 67.826 1.00 17.64
     ATOM  691 CB LEU  291    12.828 13.289 68.666 1.00 17.32
   5 ATOM  692 CG LEU  291    12.824 13.961 70.046 1.00 20.40
     ATOM  693 CD1 LEU 291    11.405 13.964 70.627 1.00 22.18
     ATOM  694 CD2 LEU 291    13.789 13.222 70.971 1.00 23.46
     ATOM  695 C  LEU  291    14.087 12.662 66.595 1.00 15.65
     ATOM  696 O  LEU  291    14.645 11.569 66.611 1.00 17.39
  10 ATOM  697 N  PHE  292    13.434 13.116 65.520 1.00 14.81
     ATOM  698 CA PHE  292    13.360 12.330 64.311 1.00 15.62
     ATOM  699 CB PHE  292    12.392 12.993 63.314 1.00 16.43
     ATOM  700 CG PHE  292    12.003 12.113 62.167 1.00 16.59
     ATOM  701 CD1 PHE 292    11.588 10.812 62.389 1.00 18.96
  15 ATOM  702 CD2 PHE 292    12.002 12.607 60.875 1.00 19.01
     ATOM  703 CE1 PHE 292    11.170 10.011 61.332 1.00 20.62
     ATOM  704 CE2 PHE 292    11.581 11.805 59.805 1.00 18.46
     ATOM  705 CZ PHE  292    11.166 10.499 60.060 1.00 18.06
     ATOM  706 C  PHE  292    14.761 12.191 63.713 1.00 15.70
  20 ATOM  707 O  PHE  292    15.132 11.119 63.236 1.00 15.72
     ATOM  708 N  ALA  293    15.526 13.278 63.760 1.00 16.34
     ATOM  709 CA ALA  293    16.906 13.267 63.232 1.00 16.73
     ATOM  710 CB ALA  293    17.464 14.702 63.207 1.00 17.74
     ATOM  711 C  ALA  293    17.802 12.368 64.090 1.00 17.09
  25 ATOM  712 O  ALA  293    18.668 11.654 63.570 1.00 17.27
     ATOM  713 N  ILE  294    17.623 12.423 65.407 1.00 16.09
     ATOM  714 CA ILE  294    18.389 11.569 66.312 1.00 16.22
     ATOM  715 CB ILE  294    18.032 11.857 67.768 1.00 15.67
     ATOM  716 CG2 ILE 294    18.584 10.765 68.679 1.00 16.66
  30 ATOM  717 CG1 ILE 294    18.615 13.218 68.160 1.00 17.00
     ATOM  718 CD1 ILE 294    18.206 13.635 69.535 1.00 20.77
     ATOM  719 C  ILE  294    18.070 10.111 65.971 1.00 16.74
     ATOM  720 O  ILE  294    18.954  9.296 65.833 1.00 16.38
     ATOM  721 N  ALA  295    16.791  9.791 65.774 1.00 16.15
  35 ATOM  722 CA ALA  295    16.452  8.420 65.424 1.00 16.99
     ATOM  723 CB ALA  295    14.937  8.273 65.332 1.00 16.54
     ATOM  724 C  ALA  295    17.083  7.993 64.088 1.00 17.97
     ATOM  725 O  ALA  295    17.563  6.870 63.954 1.00 18.01
     ATOM  726 N  TRP  296    17.071  8.881 63.102 1.00 18.59
  40 ATOM  727 CA TRP  296    17.625  8.570 61.782 1.00 18.81
     ATOM  728 CB TRP  296    17.321  9.740 60.835 1.00 20.21
     ATOM  729 CG TRP  296    17.849  9.622 59.451 1.00 22.61
     ATOM  730 CD2 TRP 296    17.398  8.716 58.433 1.00 25.62
     ATOM  731 CE2 TRP 296    18.125  9.007 57.265 1.00 26.25
  45 ATOM  732 CE3 TRP 296    16.448  7.683 58.402 1.00 25.95
     ATOM  733 CD1 TRP 296    18.807 10.403 58.871 1.00 26.23
     ATOM  734 NE1 TRP 296    18.975 10.043 57.556 1.00 26.50
     ATOM  735 CZ2 TRP 296    17.934  8.297 56.063 1.00 27.77
     ATOM  736 CZ3 TRP 296    16.257  6.977 57.206 1.00 27.65
  50 ATOM  737 CH2 TRP 296    16.996  7.289 56.061 1.00 25.35
     ATOM  738 C  TRP  296    19.133  8.299 61.878 1.00 19.53
     ATOM  739 O  TRP  296    19.647  7.296 61.345 1.00 21.43
     ATOM  740 N  ARG  297    19.833  9.147 62.623 1.00 18.58
     ATOM  741 CA ARG  297    21.280  8.974 62.748 1.00 18.22
  55 ATOM  742 CB ARG  297    21.923 10.208 63.376 1.00 18.92
     ATOM  743 CG ARG  297    21.886 11.465 62.525 1.00 20.63
     ATOM  744 CD ARG  297    22.792 12.530 63.137 1.00 26.15
     ATOM  745 NE ARG  297    22.219 13.002 64.381 1.00 29.32
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	ATOM	746	CZ	ARG	297	21.393	14.040	64.462	1.00	28.97
	ATOM	747	NH1	ARG	297	21.066	14.720	63.373	1.00	29.81
	ATOM	748	NH2	ARG	297	20.872	14.372	65.628	1.00	31.03
	ATOM	749	C	ARG	297	21.643	7.776	63.605	1.00	18.87
5	ATOM	750	O	ARG	297	22.738	7.225	63.473	1.00	19.01
	ATOM	751	N	SER	298	20.749	7.404	64.511	1.00	17.52
	ATOM	752	CA	SER	298	21.023	6.293	65.414	1.00	18.09
	ATOM	753	CB	SER	298	20.134	6.407	66.655	1.00	18.94
	ATOM	754	OG	SER	298	20.412	7.606	67.381	1.00	18.16
10	ATOM	755	C	SER	298	20.865	4.929	64.770	1.00	20.63
	ATOM	756	O	SER	298	21.310	3.925	65.336	1.00	24.22
	ATOM	757	N	MET	299	20.270	4.868	63.582	1.00	20.01
	ATOM	758	CA	MET	299	20.106	3.558	62.953	1.00	22.16
	ATOM	759	CB	MET	299	19.367	3.682	61.610	1.00	24.42
15	ATOM	760	CG	MET	299	17.940	4.159	61.735	1.00	24.29
	ATOM	761	SD	MET	299	17.091	4.052	60.130	1.00	31.30
	ATOM	762	CE	MET	299	18.221	4.950	59.082	1.00	31.06
	ATOM	763	C	MET	299	21.431	2.825	62.725	1.00	25.30
	ATOM	764	O	MET	299	21.493	1.600	62.859	1.00	26.84
20	ATOM	765	N	GLU	300	22.485	3.565	62.414	1.00	28.43
	ATOM	766	CA	GLU	300	23.775	2.944	62.117	1.00	32.11
	ATOM	767	CB	GLU	300	24.736	3.949	61.472	1.00	34.60
	ATOM	768	CG	GLU	300	25.355	4.941	62.420	1.00	40.06
	ATOM	769	CD	GLU	300	26.689	5.477	61.910	1.00	43.56
25	ATOM	770	OE1	GLU	300	27.622	4.666	61.729	1.00	46.83
	ATOM	771	OE2	GLU	300	26.812	6.703	61.688	1.00	45.34
	ATOM	772	C	GLU	300	24.467	2.304	63.300	1.00	32.94
	ATOM	773	O	GLU	300	25.389	1.517	63.123	1.00	32.67
	ATOM	774	N	PHE	301	24.033	2.649	64.507	1.00	31.51
30	ATOM	775	CA	PHE	301	24.632	2.094	65.710	1.00	32.60
	ATOM	776	CB	PHE	301	24.822	3.214	66.736	1.00	32.49
	ATOM	777	CG	PHE	301	25.879	4.203	66.349	1.00	34.07
	ATOM	778	CD1	PHE	301	27.223	3.838	66.358	1.00	33.32
	ATOM	779	CD2	PHE	301	25.537	5.483	65.929	1.00	33.10
35	ATOM	780	CE1	PHE	301	28.207	4.737	65.949	1.00	34.17
	ATOM	781	CE2	PHE	301	26.506	6.385	65.519	1.00	34.69
	ATOM	782	CZ	PHE	301	27.854	6.008	65.530	1.00	33.21
	ATOM	783	C	PHE	301	23.820	0.940	66.301	1.00	33.77
	ATOM	784	O	PHE	301	24.127	0.441	67.377	1.00	34.55
40	ATOM	785	N	LEU	302	22.780	0.516	65.589	1.00	34.80
	ATOM	786	CA	LEU	302	21.966	-0.593	66.045	1.00	36.81
	ATOM	787	CB	LEU	302	20.641	-0.645	65.287	1.00	34.98
	ATOM	788	CG	LEU	302	19.779	0.596	65.488	1.00	31.61
	ATOM	789	CD1	LEU	302	18.551	0.528	64.577	1.00	31.62
45	ATOM	790	CD2	LEU	302	19.386	0.717	66.955	1.00	31.48
	ATOM	791	C	LEU	302	22.744	-1.869	65.775	1.00	40.52
	ATOM	792	O	LEU	302	23.333	-2.038	64.701	1.00	40.16
	ATOM	793	N	THR	303	22.733	-2.764	66.753	1.00	44.10
	ATOM	794	CA	THR	303	23.422	-4.037	66.634	1.00	48.80
50	ATOM	795	CB	THR	303	23.126	-4.933	67.850	1.00	49.83
	ATOM	796	OG1	THR	303	23.211	-4.151	69.050	1.00	51.18
	ATOM	797	CG2	THR	303	24.132	-6.076	67.924	1.00	51.25
	ATOM	798	C	THR	303	22.932	-4.731	65.368	1.00	50.84
	ATOM	799	O	THR	303	21.739	-4.703	65.052	1.00	50.20
55	ATOM	800	N	ALA	304	23.864	-5.341	64.644	1.00	53.24
	ATOM	801	CA	ALA	304	23.538	-6.040	63.410	1.00	55.88
	ATOM	802	CB	ALA	304	24.739	-6.867	62.946	1.00	56.05
	ATOM	803	C	ALA	304	22.317	-6.942	63.575	1.00	57.61

	ATOM	804	O	ALA	304	22.133	-7.583	64.617	1.00	58.45	
	ATOM	805	N	ALA	305	21.481	-6.972	62.540	1.00	59.51	
	ATOM	806	CA	ALA	305	20.282	-7.797	62.535	1.00	60.68	
	ATOM	807	CB	ALA	305	19.548	-7.651	61.205	1.00	60.98	
5	ATOM	808	C	ALA	305	20.714	-9.245	62.744	1.00	61.71	
	ATOM	809	O	ALA	305	19.925	-10.029	63.319	1.00	62.15	
	ATOM	810	OXT	ALA	305	21.848	-9.572	62.316	1.00	61.88	
	ATOM	811	CB	ALA	316	17.484	-11.402	70.435	1.00	59.02	
	ATOM	812	C	ALA	316	15.833	-9.781	71.403	1.00	57.95	
10	ATOM	813	O	ALA	316	15.469	-9.327	70.316	1.00	58.69	
	ATOM	814	N	ALA	316	15.341	-12.224	71.375	1.00	58.18	
	ATOM	815	CA	ALA	316	16.413	-11.191	71.510	1.00	58.61	
	ATOM	816	N	ALA	317	15.747	-9.096	72.539	1.00	56.79	
	ATOM	817	CA	ALA	317	15.218	-7.739	72.587	1.00	54.70	
15	ATOM	818	CB	ALA	317	13.813	-7.745	73.174	1.00	54.73	
	ATOM	819	C	ALA	317	16.142	-6.871	73.437	1.00	52.91	
	ATOM	820	O	ALA	317	15.697	-5.935	74.111	1.00	53.06	
	ATOM	821	N	SER	318	17.430	-7.207	73.404	1.00	49.42	
	ATOM	822	CA	SER	318	18.449	-6.478	74.151	1.00	46.14	
20	ATOM	823	CB	SER	318	19.830	-7.056	73.835	1.00	46.72	
	ATOM	824	OG	SER	318	20.834	-6.462	74.639	1.00	47.98	
	ATOM	825	C	SER	318	18.378	-5.009	73.723	1.00	43.02	
	ATOM	826	O	SER	318	18.543	-4.686	72.541	1.00	44.27	
	ATOM	827	N	PRO	319	18.122	-4.100	74.676	0.50	41.03	AC1
25	ATOM	828	CD	PRO	319	17.740	-4.342	76.079	0.50	40.29	AC1
	ATOM	829	CA	PRO	319	18.033	-2.672	74.351	0.50	38.31	AC1
	ATOM	830	CB	PRO	319	17.690	-2.032	75.694	0.50	38.96	AC1
	ATOM	831	CG	PRO	319	16.927	-3.116	76.402	0.50	39.34	AC1
	ATOM	832	C	PRO	319	19.310	-2.080	73.756	0.50	35.85	AC1
30	ATOM	833	O	PRO	319	20.394	-2.240	74.319	0.50	35.73	AC1
	ATOM	834	N	PRO	320	19.197	-1.403	72.599	1.00	33.69	
	ATOM	835	CD	PRO	320	18.041	-1.404	71.692	1.00	32.09	
	ATOM	836	CA	PRO	320	20.362	-0.784	71.952	1.00	30.83	
	ATOM	837	CB	PRO	320	19.769	-0.083	70.722	1.00	30.11	
35	ATOM	838	CG	PRO	320	18.279	-0.174	70.892	1.00	32.74	
	ATOM	839	C	PRO	320	21.008	0.185	72.949	1.00	27.19	
	ATOM	840	O	PRO	320	20.317	0.824	73.756	1.00	27.36	
	ATOM	841	N	GLN	321	22.328	0.297	72.890	1.00	25.76	
	ATOM	842	CA	GLN	321	23.060	1.121	73.847	1.00	25.85	
40	ATOM	843	CB	GLN	321	24.262	0.329	74.357	1.00	29.20	
	ATOM	844	CG	GLN	321	23.925	-1.090	74.757	1.00	34.12	
	ATOM	845	CD	GLN	321	23.408	-1.197	76.163	1.00	38.11	
	ATOM	846	OE1	GLN	321	24.127	-0.916	77.123	1.00	40.85	
	ATOM	847	NE2	GLN	321	22.150	-1.617	76.302	1.00	40.57	
45	ATOM	848	C	GLN	321	23.546	2.495	73.423	1.00	23.90	
	ATOM	849	O	GLN	321	23.914	3.297	74.275	1.00	24.18	
	ATOM	850	N	LEU	322	23.536	2.790	72.128	1.00	22.59	
	ATOM	851	CA	LEU	322	24.050	4.080	71.666	1.00	21.41	
	ATOM	852	CB	LEU	322	25.291	3.879	70.775	1.00	22.86	
50	ATOM	853	CG	LEU	322	26.560	3.362	71.432	1.00	25.45	
	ATOM	854	CD1	LEU	322	27.625	3.130	70.345	1.00	28.06	
	ATOM	855	CD2	LEU	322	27.036	4.384	72.497	1.00	24.21	
	ATOM	856	C	LEU	322	23.079	4.942	70.891	1.00	22.08	
	ATOM	857	O	LEU	322	22.435	4.478	69.961	1.00	23.11	
55	ATOM	858	N	MET	323	23.003	6.205	71.270	1.00	20.81	
	ATOM	859	CA	MET	323	22.145	7.157	70.590	1.00	21.91	
	ATOM	860	CB	MET	323	21.213	7.835	71.598	1.00	23.20	
	ATOM	861	CG	MET	323	20.325	8.922	70.978	1.00	22.36	

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      ATOM   862 SD  MET  323      19.196  9.636 72.187 1.00 22.04
      ATOM   863 CE  MET  323      18.026  8.314 72.302 1.00 22.12
      ATOM   864 C   MET  323      23.054  8.187 69.914 1.00 25.54
      ATOM   865 O   MET  323      24.002  8.691 70.530 1.00 25.31
   5  ATOM   866 N   CYS  324      22.781  8.506 68.650 1.00 22.41
      ATOM   867 CA  CYS  324      23.619  9.483 67.941 1.00 24.83
      ATOM   868 CB  CYS  324      23.854  9.029 66.512 1.00 23.91
      ATOM   869 SG  CYS  324      24.921 10.185 65.588 1.00 27.74
      ATOM   870 C   CYS  324      22.995 10.873 67.950 1.00 24.34
  10  ATOM   871 O   CYS  324      22.010 11.148 67.249 1.00 24.90
      ATOM   872 N   LEU  325      23.560 11.758 68.749 1.00 24.49
      ATOM   873 CA  LEU  325      23.038 13.114 68.843 1.00 25.66
      ATOM   874 CB  LEU  325      23.421 13.746 70.183 1.00 26.79
      ATOM   875 CG  LEU  325      22.935 12.964 71.421 1.00 27.19
  15  ATOM   876 CD1 LEU  325      23.256 13.744 72.704 1.00 29.28
      ATOM   877 CD2 LEU  325      21.423 12.732 71.320 1.00 27.92
      ATOM   878 C   LEU  325      23.513 13.990 67.682 1.00 28.10
      ATOM   879 O   LEU  325      22.860 14.978 67.344 1.00 31.20
      ATOM   880 N   MET  326      24.650 13.618 67.094 1.00 28.83
  20  ATOM   881 CA  MET  326      25.253 14.311 65.947 1.00 30.95
      ATOM   882 CB  MET  326      25.726 15.721 66.350 1.00 31.86
      ATOM   883 CG  MET  326      26.894 15.710 67.335 1.00 31.84
      ATOM   884 SD  MET  326      27.648 17.333 67.693 1.00 34.98
      ATOM   885 CE  MET  326      29.085 16.800 68.706 1.00 30.77
  25  ATOM   886 C   MET  326      26.462 13.453 65.513 1.00 33.06
      ATOM   887 O   MET  326      26.882 12.565 66.242 1.00 32.71
      ATOM   888 N   PRO  327      27.013 13.682 64.307 1.00 35.54
      ATOM   889 CD  PRO  327      26.511 14.545 63.227 1.00 35.87
      ATOM   890 CA  PRO  327      28.180 12.896 63.857 1.00 36.24
  30  ATOM   891 CB  PRO  327      28.508 13.519 62.503 1.00 37.87
      ATOM   892 CG  PRO  327      27.159 13.932 62.001 1.00 35.11
      ATOM   893 C   PRO  327      29.353 13.035 64.836 1.00 38.75
      ATOM   894 O   PRO  327      29.754 14.154 65.155 1.00 38.99
      ATOM   895 N   GLY  328      29.890 11.908 65.314 1.00 38.52
  35  ATOM   896 CA  GLY  328      31.001 11.933 66.257 1.00 38.65
      ATOM   897 C   GLY  328      30.606 12.217 67.700 1.00 38.39
      ATOM   898 O   GLY  328      31.431 12.604 68.545 1.00 39.05
      ATOM   899 N   MET  329      29.326 12.020 67.994 1.00 36.32
      ATOM   900 CA  MET  329      28.830 12.251 69.326 1.00 34.24
  40  ATOM   901 CB  MET  329      28.343 13.693 69.451 1.00 38.91
      ATOM   902 CG  MET  329      27.462 13.991 70.649 1.00 44.24
      ATOM   903 SD  MET  329      28.233 13.696 72.235 1.00 50.95
      ATOM   904 CE  MET  329      26.854 12.835 73.089 1.00 48.58
      ATOM   905 C   MET  329      27.700 11.271 69.603 1.00 30.52
  45  ATOM   906 O   MET  329      26.647 11.331 68.975 1.00 28.92
      ATOM   907 N   THR  330      27.960 10.324 70.490 1.00 26.42
      ATOM   908 CA  THR  330      26.933  9.370 70.865 1.00 23.65
      ATOM   909 CB  THR  330      27.338  7.895 70.542 1.00 24.12
      ATOM   910 OG1 THR  330      28.672  7.654 71.005 1.00 27.18
  50  ATOM   911 CG2 THR  330      27.269  7.622 69.034 1.00 26.34
      ATOM   912 C   THR  330      26.685  9.475 72.360 1.00 23.23
      ATOM   913 O   THR  330      27.572  9.802 73.146 1.00 23.91
      ATOM   914 N   LEU  331      25.450  9.211 72.748 1.00 20.37
      ATOM   915 CA  LEU  331      25.082  9.213 74.142 1.00 21.33
  55  ATOM   916 CB  LEU  331      23.773  9.986 74.340 1.00 24.38
      ATOM   917 CG  LEU  331      23.113  9.731 75.696 1.00 25.70
      ATOM   918 CD1 LEU  331      23.979 10.317 76.825 1.00 30.48
      ATOM   919 CD2 LEU  331      21.723 10.348 75.694 1.00 29.64
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     ATOM  920 C   LEU 331   24.892  7.737 74.489 1.00 21.13
     ATOM  921 O   LEU 331   24.158  7.026 73.819 1.00 19.21
     ATOM  922 N   HIS 332   25.582  7.262 75.525 1.00 18.80
     ATOM  923 CA  HIS 332   25.472  5.864 75.901 1.00 18.64
 5   ATOM  924 CB  HIS 332   26.740  5.417 76.658 1.00 18.77
     ATOM  925 CG  HIS 332   26.826  3.938 76.862 1.00 21.68
     ATOM  926 CD2 HIS 332   27.533  2.991 76.205 1.00 22.97
     ATOM  927 ND1 HIS 332   26.092  3.273 77.824 1.00 22.38
     ATOM  928 CE1 HIS 332   26.340  1.978 77.745 1.00 23.74
10   ATOM  929 NE2 HIS 332   27.213  1.778 76.769 1.00 25.26
     ATOM  930 C   HIS 332   24.262  5.721 76.820 1.00 18.95
     ATOM  931 O   HIS 332   23.981  6.620 77.616 1.00 19.91
     ATOM  932 N   ARG 333   23.594  4.581 76.715 1.00 19.39
     ATOM  933 CA  ARG 333   22.394  4.282 77.509 1.00 19.71
15   ATOM  934 CB  ARG 333   21.930  2.850 77.235 1.00 20.65
     ATOM  935 CG  ARG 333   20.582  2.512 77.896 1.00 21.54
     ATOM  936 CD  ARG 333   20.018  1.212 77.353 1.00 21.69
     ATOM  937 NE  ARG 333   18.703  0.862 77.899 1.00 20.98
     ATOM  938 CZ  ARG 333   18.501  0.034 78.921 1.00 22.46
20   ATOM  939 NH1 ARG 333   19.535 -0.547 79.531 1.00 24.12
     ATOM  940 NH2 ARG 333   17.255 -0.241 79.309 1.00 20.87
     ATOM  941 C   ARG 333   22.643  4.463 79.018 1.00 21.14
     ATOM  942 O   ARG 333   21.782  4.926 79.755 1.00 18.39
     ATOM  943 N   ASN 334   23.832  4.107 79.484 1.00 21.27
25   ATOM  944 CA  ASN 334   24.114  4.259 80.910 1.00 23.47
     ATOM  945 CB  ASN 334   25.486  3.653 81.244 1.00 24.93
     ATOM  946 CG  ASN 334   25.504  2.119 81.158 1.00 25.59
     ATOM  947 OD1 ASN 334   24.467  1.461 81.054 1.00 26.24
     ATOM  948 ND2 ASN 334   26.707  1.544 81.204 1.00 29.08
30   ATOM  949 C   ASN 334   24.048  5.718 81.380 1.00 22.91
     ATOM  950 O   ASN 334   23.649  6.000 82.530 1.00 22.99
     ATOM  951 N   SER 335   24.441  6.657 80.524 1.00 22.89
     ATOM  952 CA  SER 335   24.378  8.059 80.904 1.00 22.41
     ATOM  953 CB  SER 335   25.178  8.915 79.930 1.00 27.35
35   ATOM  954 OG  SER 335   26.517  8.437 79.856 1.00 31.39
     ATOM  955 C   SER 335   22.908  8.484 80.939 1.00 23.03
     ATOM  956 O   SER 335   22.496  9.260 81.809 1.00 22.21
     ATOM  957 N   ALA 336   22.126  7.970 79.989 1.00 21.81
     ATOM  958 CA  ALA 336   20.703  8.255 79.952 1.00 21.09
40   ATOM  959 CB  ALA 336   20.060  7.595 78.718 1.00 21.81
     ATOM  960 C   ALA 336   20.044  7.744 81.232 1.00 21.37
     ATOM  961 O   ALA 336   19.209  8.425 81.830 1.00 19.40
     ATOM  962 N   LEU 337   20.423  6.540 81.660 1.00 19.77
     ATOM  963 CA  LEU 337   19.860  5.960 82.865 1.00 19.59
45   ATOM  964 CB  LEU 337   20.374  4.517 83.039 1.00 19.20
     ATOM  965 CG  LEU 337   19.835  3.502 82.031 1.00 20.97
     ATOM  966 CD1 LEU 337   20.702  2.280 82.055 1.00 23.49
     ATOM  967 CD2 LEU 337   18.391  3.164 82.329 1.00 21.07
     ATOM  968 C   LEU 337   20.206  6.777 84.089 1.00 20.54
50   ATOM  969 O   LEU 337   19.364  6.997 84.985 1.00 19.57
     ATOM  970 N   GLN 338   21.454  7.226 84.131 1.00 21.36
     ATOM  971 CA  GLN 338   21.920  7.994 85.264 1.00 22.39
     ATOM  972 CB  GLN 338   23.439  8.206 85.179 1.00 22.44
     ATOM  973 CG  GLN 338   23.973  8.755 86.488 1.00 27.14
55   ATOM  974 CD  GLN 338   25.467  9.026 86.481 1.00 29.23
     ATOM  975 OE1 GLN 338   25.955  9.827 87.278 1.00 30.73
     ATOM  976 NE2 GLN 338   26.196  8.360 85.596 1.00 30.79
     ATOM  977 C   GLN 338   21.200  9.331 85.381 1.00 23.40
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      ATOM   978 O   GLN 338    20.894  9.790 86.490 1.00 21.75
      ATOM   979 N   ALA 339    20.899  9.935 84.227 1.00 22.63
      ATOM   980 CA  ALA 339    20.215 11.217 84.191 1.00 24.41
      ATOM   981 CB  ALA 339    20.430 11.903 82.832 1.00 23.46
   5  ATOM   982 C   ALA 339    18.727 11.082 84.463 1.00 24.73
      ATOM   983 O   ALA 339    18.059 12.084 84.641 1.00 27.16
      ATOM   984 N   GLY 340    18.218  9.850 84.499 1.00 22.58
      ATOM   985 CA  GLY 340    16.803  9.622 84.754 1.00 23.89
      ATOM   986 C   GLY 340    15.898  9.580 83.531 1.00 25.09
  10  ATOM   987 O   GLY 340    14.666  9.607 83.666 1.00 25.54
      ATOM   988 N   VAL 341    16.492  9.479 82.346 1.00 23.51
      ATOM   989 CA  VAL 341    15.719  9.473 81.095 1.00 20.92
      ATOM   990 CB  VAL 341    16.134 10.677 80.211 1.00 21.83
      ATOM   991 CG1 VAL 341    15.838 11.981 80.942 1.00 21.94
  15  ATOM   992 CG2 VAL 341    17.621 10.577 79.858 1.00 21.91
      ATOM   993 C   VAL 341    15.891  8.185 80.300 1.00 20.24
      ATOM   994 O   VAL 341    15.803  8.182 79.083 1.00 19.53
      ATOM   995 N   GLY 342    16.132  7.079 80.999 1.00 19.65
      ATOM   996 CA  GLY 342    16.324  5.827 80.301 1.00 18.76
  20  ATOM   997 C   GLY 342    15.104  5.352 79.541 1.00 19.27
      ATOM   998 O   GLY 342    15.230  4.771 78.470 1.00 18.82
      ATOM   999 N   GLN 343    13.922  5.598 80.088 0.50 18.31   AC1
      ATOM  1000 CA  GLN 343    12.706  5.163 79.422 0.50 19.11   AC1
      ATOM  1001 CB  GLN 343    11.507  5.485 80.305 0.50 19.94   AC1
  25  ATOM  1002 CG  GLN 343    10.200  4.866 79.867 0.50 22.91   AC1
      ATOM  1003 CD  GLN 343     9.082  5.177 80.852 0.50 24.13   AC1
      ATOM  1004 OE1 GLN 343     8.669  6.326 80.995 0.50 26.85   AC1
      ATOM  1005 NE2 GLN 343     8.606  4.154 81.555 0.50 25.40   AC1
      ATOM  1006 C   GLN 343    12.542  5.813 78.043 0.50 19.14   AC1
  30  ATOM  1007 O   GLN 343    12.318  5.127 77.050 0.50 18.83   AC1
      ATOM  1008 N   ILE 344    12.664  7.136 77.977 1.00 17.95
      ATOM  1009 CA  ILE 344    12.506  7.812 76.693 1.00 17.74
      ATOM  1010 CB  ILE 344    12.348  9.372 76.875 1.00 18.47
      ATOM  1011 CG2 ILE 344    13.700 10.010 77.231 1.00 20.66
  35  ATOM  1012 CG1 ILE 344    11.754  9.984 75.596 1.00 19.04
      ATOM  1013 CD1 ILE 344    11.445 11.499 75.662 1.00 21.07
      ATOM  1014 C   ILE 344    13.641  7.448 75.718 1.00 17.34
      ATOM  1015 O   ILE 344    13.440  7.389 74.499 1.00 16.12
      ATOM  1016 N   PHE 345    14.844  7.210 76.248 1.00 16.60
  40  ATOM  1017 CA  PHE 345    15.976  6.826 75.417 1.00 17.63
      ATOM  1018 CB  PHE 345    17.208  6.636 76.322 1.00 17.86
      ATOM  1019 CG  PHE 345    18.455  6.189 75.613 1.00 18.24
      ATOM  1020 CD1 PHE 345    18.657  4.848 75.273 1.00 18.20
      ATOM  1021 CD2 PHE 345    19.470  7.090 75.363 1.00 20.10
      ATOM  1022 CE1 PHE 345    19.854  4.412 74.706 1.00 19.01
  45  ATOM  1023 CE2 PHE 345    20.663  6.673 74.798 1.00 17.96
      ATOM  1024 CZ  PHE 345    20.861  5.328 74.469 1.00 18.58
      ATOM  1025 C   PHE 345    15.603  5.522 74.710 1.00 18.98
      ATOM  1026 O   PHE 345    15.756  5.389 73.491 1.00 18.15
  50  ATOM  1027 N   ASP 346    15.072  4.568 75.480 1.00 18.04
      ATOM  1028 CA  ASP 346    14.695  3.300 74.894 1.00 18.83
      ATOM  1029 CB  ASP 346    14.285  2.302 75.988 1.00 19.96
      ATOM  1030 CG  ASP 346    15.467  1.768 76.786 1.00 24.04
      ATOM  1031 OD1 ASP 346    16.630  2.038 76.430 1.00 24.95
      ATOM  1032 OD2 ASP 346    15.232  1.043 77.784 1.00 24.86
  55  ATOM  1033 C   ASP 346    13.550  3.462 73.872 1.00 18.04
      ATOM  1034 O   ASP 346    13.549  2.782 72.841 1.00 19.39
      ATOM  1035 N   ARG 347    12.603  4.359 74.138 1.00 19.77
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      ATOM  1036 CA  ARG  347    11.493  4.579 73.188 1.00 20.42
      ATOM  1037 CB  ARG  347    10.443  5.558 73.708 1.00 24.20
      ATOM  1038 CG  ARG  347     9.527  5.024 74.786 1.00 26.30
      ATOM  1039 CD  ARG  347     8.310  5.929 74.937 1.00 28.76
  5   ATOM  1040 NE  ARG  347     7.383  5.807 73.813 1.00 29.58
      ATOM  1041 CZ  ARG  347     6.312  6.577 73.629 1.00 31.91
      ATOM  1042 NH1 ARG  347     6.028  7.536 74.492 1.00 32.14
      ATOM  1043 NH2 ARG  347     5.522  6.378 72.579 1.00 32.47
      ATOM  1044 C   ARG  347    12.012  5.120 71.875 1.00 20.09
 10   ATOM  1045 O   ARG  347    11.586  4.703 70.806 1.00 18.14
      ATOM  1046 N   VAL  348    12.939  6.073 71.945 1.00 18.48
      ATOM  1047 CA  VAL  348    13.480  6.621 70.708 1.00 18.94
      ATOM  1048 CB  VAL  348    14.532  7.713 70.991 1.00 18.19
      ATOM  1049 CG1 VAL  348    15.286  8.052 69.706 1.00 18.18
 15   ATOM  1050 CG2 VAL  348    13.862  8.930 71.600 1.00 19.11
      ATOM  1051 C   VAL  348    14.143  5.518 69.882 1.00 18.63
      ATOM  1052 O   VAL  348    13.885  5.380 68.691 1.00 17.99
      ATOM  1053 N   LEU  349    14.981  4.709 70.514 1.00 18.35
      ATOM  1054 CA  LEU  349    15.679  3.686 69.749 1.00 19.38
 20   ATOM  1055 CB  LEU  349    16.906  3.175 70.526 1.00 20.34
      ATOM  1056 CG  LEU  349    17.920  4.286 70.807 1.00 20.49
      ATOM  1057 CD1 LEU  349    19.173  3.626 71.408 1.00 23.32
      ATOM  1058 CD2 LEU  349    18.273  5.078 69.500 1.00 18.92
      ATOM  1059 C   LEU  349    14.822  2.509 69.294 1.00 20.39
 25   ATOM  1060 O   LEU  349    15.112  1.901 68.263 1.00 19.62
      ATOM  1061 N   SER  350    13.746  2.208 70.025 1.00 21.15
      ATOM  1062 CA  SER  350    12.907  1.074 69.623 1.00 23.27
      ATOM  1063 CB  SER  350    12.443  0.294 70.855 1.00 25.65
      ATOM  1064 OG  SER  350    11.622  1.081 71.687 1.00 28.64
 30   ATOM  1065 C   SER  350    11.698  1.451 68.766 1.00 21.84
      ATOM  1066 O   SER  350    11.424  0.790 67.762 1.00 25.35
      ATOM  1067 N   GLU  351    10.986  2.516 69.131 1.00 22.62
      ATOM  1068 CA  GLU  351     9.801  2.906 68.368 1.00 22.04
      ATOM  1069 CB  GLU  351     8.834  3.680 69.252 1.00 22.43
 35   ATOM  1070 CG  GLU  351     8.454  2.916 70.486 1.00 26.86
      ATOM  1071 CD  GLU  351     7.434  3.650 71.303 1.00 28.97
      ATOM  1072 OE1 GLU  351     7.473  3.544 72.548 1.00 31.85
      ATOM  1073 OE2 GLU  351     6.581  4.330 70.691 1.00 32.68
      ATOM  1074 C   GLU  351    10.133  3.708 67.132 1.00 22.11
 40   ATOM  1075 O   GLU  351     9.348  3.766 66.183 1.00 22.30
      ATOM  1076 N   LEU  352    11.309  4.328 67.113 1.00 19.99
      ATOM  1077 CA  LEU  352    11.696  5.083 65.934 1.00 19.01
      ATOM  1078 CB  LEU  352    12.043  6.555 66.293 1.00 18.64
      ATOM  1079 CG  LEU  352    10.911  7.365 66.950 1.00 19.12
 45   ATOM  1080 CD1 LEU  352    11.445  8.742 67.339 1.00 19.51
      ATOM  1081 CD2 LEU  352     9.703  7.505 66.018 1.00 19.25
      ATOM  1082 C   LEU  352    12.859  4.467 65.163 1.00 19.51
      ATOM  1083 O   LEU  352    12.704  3.977 64.038 1.00 21.10
      ATOM  1084 N   SER  353    14.052  4.464 65.754 0.50 18.72   AC1
 50   ATOM  1085 CA  SER  353    15.203  3.933 65.034 0.50 18.55   AC1
      ATOM  1086 CB  SER  353    16.473  4.032 65.883 0.50 16.66   AC1
      ATOM  1087 OG  SER  353    16.782  5.378 66.160 0.50 11.47   AC1
      ATOM  1088 C   SER  353    15.045  2.500 64.546 0.50 19.60   AC1
      ATOM  1089 O   SER  353    15.207  2.236 63.355 0.50 20.26   AC1
 55   ATOM  1090 N   LEU  354    14.746  1.579 65.455 1.00 21.67
      ATOM  1091 CA  LEU  354    14.602  0.181 65.051 1.00 23.55
      ATOM  1092 CB  LEU  354    14.360 -0.715 66.278 1.00 24.35
      ATOM  1093 CG  LEU  354    14.284 -2.222 66.012 1.00 30.18
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      ATOM  1094 CD1 LEU  354    15.388 -2.664 65.055 1.00 31.88
      ATOM  1095 CD2 LEU  354    14.392 -2.944 67.345 1.00 31.36
      ATOM  1096 C   LEU  354    13.489 -0.011 64.009 1.00 24.82
      ATOM  1097 O   LEU  354    13.696 -0.684 63.004 1.00 25.66
  5   ATOM  1098 N   LYS  355    12.324  0.587 64.234 1.00 26.97
      ATOM  1099 CA  LYS  355    11.236  0.454 63.272 1.00 26.95
      ATOM  1100 CB  LYS  355    10.003  1.226 63.735 1.00 29.30
      ATOM  1101 CG  LYS  355     9.228  0.572 64.843 1.00 34.34
      ATOM  1102 CD  LYS  355     8.440 -0.616 64.321 1.00 38.57
  10  ATOM  1103 CE  LYS  355     7.365 -1.007 65.319 1.00 39.54
      ATOM  1104 NZ  LYS  355     7.883 -0.958 66.713 1.00 40.20
      ATOM  1105 C   LYS  355    11.637  0.964 61.899 1.00 27.30
      ATOM  1106 O   LYS  355    11.281  0.369 60.883 1.00 28.58
      ATOM  1107 N   MET  356    12.362  2.080 61.860 1.00 25.41
  15  ATOM  1108 CA  MET  356    12.787  2.641 60.594 1.00 25.37
      ATOM  1109 CB  MET  356    13.279  4.071 60.778 1.00 27.04
      ATOM  1110 CG  MET  356    12.126  5.017 60.918 1.00 26.57
      ATOM  1111 SD  MET  356    12.669  6.671 60.768 1.00 36.72
      ATOM  1112 CE  MET  356    13.015  6.835 62.357 1.00 16.80
  20  ATOM  1113 C   MET  356    13.836  1.808 59.896 1.00 26.93
      ATOM  1114 O   MET  356    13.907  1.807 58.676 1.00 25.41
      ATOM  1115 N   ARG  357    14.672  1.114 60.661 1.00 27.88
      ATOM  1116 CA  ARG  357    15.656  0.281 60.003 1.00 29.75
      ATOM  1117 CB  ARG  357    16.733 -0.214 60.961 1.00 31.09
  25  ATOM  1118 CG  ARG  357    17.748 -1.056 60.213 1.00 35.17
      ATOM  1119 CD  ARG  357    18.840 -1.607 61.112 1.00 38.46
      ATOM  1120 NE  ARG  357    18.313 -2.543 62.097 1.00 41.53
      ATOM  1121 CZ  ARG  357    19.066 -3.164 63.003 1.00 43.38
      ATOM  1122 NH1 ARG  357    20.376 -2.942 63.037 1.00 42.92
  30  ATOM  1123 NH2 ARG  357    18.512 -3.995 63.879 1.00 43.48
      ATOM  1124 C   ARG  357    14.926 -0.925 59.422 1.00 29.63
      ATOM  1125 O   ARG  357    15.218 -1.353 58.310 1.00 29.83
      ATOM  1126 N   THR  358    13.966 -1.452 60.171 1.00 29.51
      ATOM  1127 CA  THR  358    13.204 -2.609 59.704 1.00 30.65
  35  ATOM  1128 CB  THR  358    12.273 -3.117 60.812 1.00 31.00
      ATOM  1129 OG1 THR  358    13.071 -3.609 61.895 1.00 32.46
      ATOM  1130 CG2 THR  358    11.374 -4.260 60.306 1.00 34.28
      ATOM  1131 C   THR  358    12.408 -2.281 58.438 1.00 30.73
      ATOM  1132 O   THR  358    12.286 -3.114 57.533 1.00 32.33
  40  ATOM  1133 N   LEU  359    11.895 -1.056 58.359 1.00 29.40
      ATOM  1134 CA  LEU  359    11.124 -0.610 57.201 1.00 29.68
      ATOM  1135 CB  LEU  359    10.242  0.583 57.605 1.00 30.32
      ATOM  1136 CG  LEU  359     8.732  0.609 57.321 1.00 34.26
      ATOM  1137 CD1 LEU  359     8.197  2.038 57.529 1.00 33.77
  45  ATOM  1138 CD2 LEU  359     8.452  0.142 55.900 1.00 34.08
      ATOM  1139 C   LEU  359    12.046 -0.168 56.066 1.00 28.77
      ATOM  1140 O   LEU  359    11.585  0.164 54.974 1.00 27.98
      ATOM  1141 N   ARG  360    13.349 -0.130 56.327 1.00 30.53
      ATOM  1142 CA  ARG  360    14.315  0.310 55.327 1.00 30.15
  50  ATOM  1143 CB  ARG  360    14.381 -0.695 54.178 1.00 33.80
      ATOM  1144 CG  ARG  360    14.798 -2.076 54.625 1.00 36.43
      ATOM  1145 CD  ARG  360    14.018 -3.165 53.900 1.00 39.56
      ATOM  1146 NE  ARG  360    12.588 -3.168 54.226 1.00 41.14
      ATOM  1147 CZ  ARG  360    11.618 -2.942 53.340 1.00 42.18
  55  ATOM  1148 NH1 ARG  360    11.918 -2.688 52.071 1.00 41.02
      ATOM  1149 NH2 ARG  360    10.345 -2.983 53.717 1.00 42.86
      ATOM  1150 C   ARG  360    13.975  1.699 54.787 1.00 29.92
      ATOM  1151 O   ARG  360    14.073  1.958 53.592 1.00 28.84
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     ATOM  1152 N   VAL  361    13.569  2.600 55.677 1.00 27.64
     ATOM  1153 CA  VAL  361    13.261  3.956 55.267 1.00 25.17
     ATOM  1154 CB  VAL  361    12.909  4.819 56.480 1.00 24.00
     ATOM  1155 CG1 VAL  361    12.684  6.254 56.066 1.00 24.37
  5  ATOM  1156 CG2 VAL  361    11.688  4.249 57.166 1.00 23.19
     ATOM  1157 C   VAL  361    14.504  4.525 54.594 1.00 25.34
     ATOM  1158 O   VAL  361    15.613  4.407 55.133 1.00 25.79
     ATOM  1159 N   ASP  362    14.344  5.109 53.404 1.00 24.62
     ATOM  1160 CA  ASP  362    15.481  5.712 52.718 1.00 24.80
 10  ATOM  1161 CB  ASP  362    15.540  5.316 51.223 1.00 27.01
     ATOM  1162 CG  ASP  362    14.307  5.720 50.433 1.00 29.25
     ATOM  1163 OD1 ASP  362    13.697  6.764 50.731 1.00 27.58
     ATOM  1164 OD2 ASP  362    13.963  4.987 49.479 1.00 32.41
     ATOM  1165 C   ASP  362    15.520  7.226 52.863 1.00 25.99
 15  ATOM  1166 O   ASP  362    14.631  7.823 53.486 1.00 25.65
     ATOM  1167 N   GLN  363    16.561  7.845 52.312 1.00 24.73
     ATOM  1168 CA  GLN  363    16.742  9.286 52.405 1.00 26.50
     ATOM  1169 CB  GLN  363    18.044  9.682 51.690 1.00 31.84
     ATOM  1170 CG  GLN  363    18.339 11.179 51.662 1.00 36.89
 20  ATOM  1171 CD  GLN  363    19.008 11.689 52.921 1.00 40.13
     ATOM  1172 OE1 GLN  363    18.615 11.346 54.047 1.00 42.87
     ATOM  1173 NE2 GLN  363    20.013 12.536 52.743 1.00 40.44
     ATOM  1174 C   GLN  363    15.540 10.070 51.855 1.00 25.17
     ATOM  1175 O   GLN  363    15.077 11.020 52.480 1.00 22.69
 25  ATOM  1176 N   ALA  364    15.023  9.659 50.701 1.00 24.53
     ATOM  1177 CA  ALA  364    13.863 10.340 50.099 1.00 22.80
     ATOM  1178 CB  ALA  364    13.524  9.691 48.753 1.00 22.91
     ATOM  1179 C   ALA  364    12.631 10.326 51.022 1.00 21.81
     ATOM  1180 O   ALA  364    11.946 11.336 51.178 1.00 21.88
 30  ATOM  1181 N   GLU  365    12.362  9.188 51.636 1.00 22.72
     ATOM  1182 CA  GLU  365    11.218  9.062 52.532 1.00 21.63
     ATOM  1183 CB  GLU  365    10.990  7.585 52.856 1.00 22.68
     ATOM  1184 CG  GLU  365    10.724  6.806 51.583 1.00 23.15
     ATOM  1185 CD  GLU  365    10.797  5.303 51.723 1.00 28.04
 35  ATOM  1186 OE1 GLU  365    11.632  4.813 52.501 1.00 26.39
     ATOM  1187 OE2 GLU  365    10.034  4.607 51.010 1.00 27.63
     ATOM  1188 C   GLU  365    11.454  9.881 53.798 1.00 22.43
     ATOM  1189 O   GLU  365    10.557 10.570 54.298 1.00 22.18
     ATOM  1190 N   TYR  366    12.681  9.822 54.304 1.00 22.10
 40  ATOM  1191 CA  TYR  366    13.026 10.580 55.506 1.00 22.15
     ATOM  1192 CB  TYR  366    14.494 10.316 55.871 1.00 22.04
     ATOM  1193 CG  TYR  366    15.010 11.209 56.986 1.00 22.63
     ATOM  1194 CD1 TYR  366    14.580 11.030 58.307 1.00 21.87
     ATOM  1195 CE1 TYR  366    15.023 11.864 59.328 1.00 22.24
 45  ATOM  1196 CD2 TYR  366    15.903 12.246 56.715 1.00 20.88
     ATOM  1197 CE2 TYR  366    16.366 13.092 57.731 1.00 22.98
     ATOM  1198 CZ  TYR  366    15.913 12.899 59.041 1.00 22.25
     ATOM  1199 OH  TYR  366    16.315 13.752 60.054 1.00 23.04
     ATOM  1200 C   TYR  366    12.797 12.095 55.332 1.00 19.98
 50  ATOM  1201 O   TYR  366    12.209 12.731 56.199 1.00 19.55
     ATOM  1202 N   VAL  367    13.260 12.676 54.225 1.00 20.09
     ATOM  1203 CA  VAL  367    13.080 14.106 54.034 1.00 19.12
     ATOM  1204 CB  VAL  367    13.955 14.666 52.891 1.00 20.38
     ATOM  1205 CG1 VAL  367    15.446 14.473 53.249 1.00 21.37
 55  ATOM  1206 CG2 VAL  367    13.609 14.009 51.554 1.00 19.90
     ATOM  1207 C   VAL  367    11.607 14.458 53.784 1.00 18.65
     ATOM  1208 O   VAL  367    11.165 15.538 54.178 1.00 18.48
     ATOM  1209 N   ALA  368    10.868 13.552 53.147 1.00 20.47
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      ATOM  1210 CA  ALA  368      9.447 13.787 52.893 1.00 19.05
      ATOM  1211 CB  ALA  368      8.854 12.668 51.988 1.00 18.93
      ATOM  1212 C   ALA  368      8.714 13.813 54.240 1.00 19.17
      ATOM  1213 O   ALA  368      7.863 14.682 54.487 1.00 18.81
  5   ATOM  1214 N   LEU  369      9.048 12.871 55.112 1.00 19.43
      ATOM  1215 CA  LEU  369      8.417 12.819 56.428 1.00 17.85
      ATOM  1216 CB  LEU  369      8.807 11.526 57.147 1.00 20.14
      ATOM  1217 CG  LEU  369      8.153 10.250 56.565 1.00 21.25
      ATOM  1218 CD1 LEU  369      8.810  9.041 57.154 1.00 22.02
 10   ATOM  1219 CD2 LEU  369      6.626 10.219 56.856 1.00 21.64
      ATOM  1220 C   LEU  369      8.772 14.076 57.235 1.00 19.07
      ATOM  1221 O   LEU  369      7.945 14.606 57.965 1.00 17.17
      ATOM  1222 N   LYS  370     10.007 14.567 57.120 1.00 18.01
      ATOM  1223 CA  LYS  370     10.363 15.799 57.826 1.00 19.26
 15   ATOM  1224 CB  LYS  370     11.819 16.199 57.522 1.00 18.97
      ATOM  1225 CG  LYS  370     12.888 15.349 58.203 1.00 21.31
      ATOM  1226 CD  LYS  370     14.304 15.860 57.845 1.00 25.49
      ATOM  1227 CE  LYS  370     14.445 17.367 58.009 1.00 25.79
      ATOM  1228 NZ  LYS  370     15.878 17.841 57.879 1.00 29.87
 20   ATOM  1229 C   LYS  370      9.440 16.949 57.388 1.00 17.68
      ATOM  1230 O   LYS  370      8.950 17.717 58.203 1.00 17.05
      ATOM  1231 N   ALA  371      9.209 17.075 56.081 1.00 17.98
      ATOM  1232 CA  ALA  371      8.368 18.154 55.596 1.00 17.26
      ATOM  1233 CB  ALA  371      8.344 18.154 54.065 1.00 19.00
 25   ATOM  1234 C   ALA  371      6.957 17.957 56.140 1.00 15.65
      ATOM  1235 O   ALA  371      6.299 18.909 56.533 1.00 17.13
      ATOM  1236 N   ILE  372      6.492 16.713 56.151 1.00 14.92
      ATOM  1237 CA  ILE  372      5.146 16.450 56.673 1.00 16.38
      ATOM  1238 CB  ILE  372      4.743 14.956 56.430 1.00 15.28
 30   ATOM  1239 CG2 ILE  372      3.477 14.602 57.245 1.00 17.98
      ATOM  1240 CG1 ILE  372      4.566 14.730 54.915 1.00 18.14
      ATOM  1241 CD1 ILE  372      4.413 13.271 54.530 1.00 18.13
      ATOM  1242 C   ILE  372      5.038 16.795 58.163 1.00 16.98
      ATOM  1243 O   ILE  372      4.028 17.317 58.606 1.00 16.87
 35   ATOM  1244 N   ILE  373      6.089 16.522 58.942 1.00 14.47
      ATOM  1245 CA  ILE  373      6.080 16.829 60.369 1.00 15.13
      ATOM  1246 CB  ILE  373      7.392 16.251 61.042 1.00 13.81
      ATOM  1247 CG2 ILE  373      7.530 16.783 62.463 1.00 15.08
      ATOM  1248 CG1 ILE  373      7.340 14.717 61.052 1.00 14.66
 40   ATOM  1249 CD1 ILE  373      8.709 14.031 61.219 1.00 17.60
      ATOM  1250 C   ILE  373      5.962 18.350 60.604 1.00 15.01
      ATOM  1251 O   ILE  373      5.212 18.817 61.477 1.00 15.67
      ATOM  1252 N   LEU  374      6.702 19.109 59.796 1.00 16.23
      ATOM  1253 CA  LEU  374      6.688 20.557 59.880 1.00 15.91
 45   ATOM  1254 CB  LEU  374      7.738 21.160 58.942 1.00 18.27
      ATOM  1255 CG  LEU  374      7.702 22.700 58.759 1.00 19.49
      ATOM  1256 CD1 LEU  374      8.184 23.403 60.044 1.00 18.70
      ATOM  1257 CD2 LEU  374      8.596 23.092 57.597 1.00 19.61
      ATOM  1258 C   LEU  374      5.316 21.128 59.490 1.00 17.14
 50   ATOM  1259 O   LEU  374      4.765 21.980 60.167 1.00 16.72
      ATOM  1260 N   LEU  375      4.803 20.662 58.367 1.00 17.78
      ATOM  1261 CA  LEU  375      3.561 21.202 57.831 1.00 17.01
      ATOM  1262 CB  LEU  375      3.573 21.071 56.301 1.00 19.06
      ATOM  1263 CG  LEU  375      4.788 21.715 55.581 1.00 18.84
 55   ATOM  1264 CD1 LEU  375      4.903 21.197 54.151 1.00 18.22
      ATOM  1265 CD2 LEU  375      4.644 23.234 55.610 1.00 19.41
      ATOM  1266 C   LEU  375      2.349 20.514 58.422 1.00 19.26
      ATOM  1267 O   LEU  375      1.603 19.823 57.705 1.00 19.50
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        ATOM  1268 N   ASN  376    2.178 20.727 59.723 1.00 16.95
        ATOM  1269 CA  ASN  376    1.087 20.136 60.510 1.00 19.78
        ATOM  1270 CB  ASN  376    1.605 19.772 61.912 1.00 18.97
        ATOM  1271 CG  ASN  376    0.537 19.124 62.780 1.00 23.13
   5    ATOM  1272 OD1 ASN  376   -0.527 18.732 62.289 1.00 19.72
        ATOM  1273 ND2 ASN  376    0.827 18.989 64.081 1.00 21.10
        ATOM  1274 C   ASN  376   -0.088 21.080 60.641 1.00 17.80
        ATOM  1275 O   ASN  376   -0.043 22.028 61.412 1.00 18.77
        ATOM  1276 N   PRO  377   -1.188 20.820 59.909 1.00 20.03
  10    ATOM  1277 CD  PRO  377   -1.463 19.684 59.010 1.00 19.34
        ATOM  1278 CA  PRO  377   -2.342 21.728 60.011 1.00 20.40
        ATOM  1279 CB  PRO  377   -3.239 21.293 58.858 1.00 18.78
        ATOM  1280 CG  PRO  377   -2.979 19.796 58.774 1.00 19.22
        ATOM  1281 C   PRO  377   -3.086 21.705 61.336 1.00 21.89
  15    ATOM  1282 O   PRO  377   -3.922 22.583 61.594 1.00 22.57
        ATOM  1283 N   ASP  378   -2.771 20.723 62.177 1.00 20.09
        ATOM  1284 CA  ASP  378   -3.444 20.609 63.463 1.00 22.47
        ATOM  1285 CB  ASP  378   -3.608 19.131 63.809 1.00 23.71
        ATOM  1286 CG  ASP  378   -4.555 18.426 62.847 1.00 25.43
  20    ATOM  1287 OD1 ASP  378   -5.579 19.028 62.487 1.00 28.35
        ATOM  1288 OD2 ASP  378   -4.289 17.283 62.443 1.00 30.58
        ATOM  1289 C   ASP  378   -2.823 21.403 64.603 1.00 22.30
        ATOM  1290 O   ASP  378   -3.265 21.309 65.760 1.00 22.98
        ATOM  1291 N   VAL  379   -1.793 22.181 64.279 1.00 22.51
  25    ATOM  1292 CA  VAL  379   -1.167 23.053 65.266 1.00 21.52
        ATOM  1293 CB  VAL  379    0.044 23.807 64.662 1.00 20.60
        ATOM  1294 CG1 VAL  379    0.424 25.004 65.532 1.00 22.27
        ATOM  1295 CG2 VAL  379    1.226 22.848 64.516 1.00 22.31
        ATOM  1296 C   VAL  379   -2.255 24.048 65.658 1.00 23.83
  30    ATOM  1297 O   VAL  379   -2.918 24.655 64.793 1.00 25.06
        ATOM  1298 N   LYS  380   -2.460 24.212 66.958 1.00 23.33
        ATOM  1299 CA  LYS  380   -3.490 25.124 67.430 1.00 24.49
        ATOM  1300 CB  LYS  380   -3.797 24.829 68.904 1.00 25.21
        ATOM  1301 CG  LYS  380   -4.182 23.365 69.131 1.00 28.03
  35    ATOM  1302 CD  LYS  380   -4.460 23.035 70.594 1.00 30.82
        ATOM  1303 CE  LYS  380   -4.728 21.536 70.758 1.00 31.68
        ATOM  1304 NZ  LYS  380   -4.904 21.079 72.177 1.00 33.50
        ATOM  1305 C   LYS  380   -3.055 26.573 67.250 1.00 24.85
        ATOM  1306 O   LYS  380   -1.874 26.891 67.408 1.00 25.55
  40    ATOM  1307 N   GLY  381   -3.988 27.445 66.861 1.00 24.69
        ATOM  1308 CA  GLY  381   -3.647 28.852 66.704 1.00 26.29
        ATOM  1309 C   GLY  381   -3.384 29.378 65.295 1.00 25.30
        ATOM  1310 O   GLY  381   -3.246 30.598 65.093 1.00 27.29
        ATOM  1311 N   LEU  382   -3.313 28.490 64.311 1.00 26.35
  45    ATOM  1312 CA  LEU  382   -3.054 28.914 62.941 1.00 26.95
        ATOM  1313 CB  LEU  382   -2.997 27.706 61.995 1.00 25.01
        ATOM  1314 CG  LEU  382   -1.865 26.700 62.265 1.00 24.87
        ATOM  1315 CD1 LEU  382   -2.011 25.507 61.314 1.00 24.53
        ATOM  1316 CD2 LEU  382   -0.518 27.384 62.064 1.00 24.40
  50    ATOM  1317 C   LEU  382   -4.120 29.885 62.428 1.00 28.77
        ATOM  1318 O   LEU  382   -5.310 29.719 62.695 1.00 28.39
        ATOM  1319 N   LYS  383   -3.660 30.881 61.681 1.00 30.83
        ATOM  1320 CA  LYS  383   -4.518 31.894 61.078 1.00 32.60
        ATOM  1321 CB  LYS  383   -3.670 33.104 60.699 1.00 35.65
  55    ATOM  1322 CG  LYS  383   -4.352 34.121 59.788 1.00 40.31
        ATOM  1323 CD  LYS  383   -5.044 35.203 60.589 1.00 42.92
        ATOM  1324 CE  LYS  383   -5.436 36.376 59.702 1.00 43.80
        ATOM  1325 NZ  LYS  383   -6.040 37.476 60.505 1.00 44.52
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	ATOM	1326	C	LYS	383	-5.159	31.313	59.819 1.00 32.46
	ATOM	1327	O	LYS	383	-6.374	31.411	59.620 1.00 33.42
	ATOM	1328	N	ASN	384	-4.332	30.700	58.977 1.00 30.19
	ATOM	1329	CA	ASN	384	-4.794	30.118	57.720 1.00 29.86
5	ATOM	1330	CB	ASN	384	-4.154	30.854	56.549 1.00 32.74
	ATOM	1331	CG	ASN	384	-4.460	32.336	56.570 1.00 36.46
	ATOM	1332	OD1	ASN	384	-5.625	32.730	56.585 1.00 39.59
	ATOM	1333	ND2	ASN	384	-3.418	33.166	56.583 1.00 37.88
	ATOM	1334	C	ASN	384	-4.466	28.636	57.636 1.00 26.29
10	ATOM	1335	O	ASN	384	-3.558	28.229	56.912 1.00 26.38
	ATOM	1336	N	ARG	385	-5.218	27.845	58.387 1.00 24.62
	ATOM	1337	CA	ARG	385	-5.005	26.406	58.431 1.00 24.85
	ATOM	1338	CB	ARG	385	-5.994	25.779	59.413 1.00 24.62
	ATOM	1339	CG	ARG	385	-5.910	24.275	59.561 1.00 27.77
15	ATOM	1340	CD	ARG	385	-6.705	23.839	60.785 1.00 30.37
	ATOM	1341	NE	ARG	385	-5.976	24.188	62.004 1.00 31.78
	ATOM	1342	CZ	ARG	385	-6.329	25.148	62.849 1.00 31.80
	ATOM	1343	NH1	ARG	385	-7.432	25.867	62.629 1.00 31.71
	ATOM	1344	NH2	ARG	385	-5.542	25.426	63.886 1.00 28.60
20	ATOM	1345	C	ARG	385	-5.079	25.727	57.070 1.00 24.38
	ATOM	1346	O	ARG	385	-4.289	24.824	56.783 1.00 24.23
	ATOM	1347	N	GLN	386	-6.003	26.165	56.214 1.00 24.39
	ATOM	1348	CA	GLN	386	-6.128	25.542	54.906 1.00 25.99
	ATOM	1349	CB	GLN	386	-7.320	26.124	54.128 1.00 29.68
25	ATOM	1350	CG	GLN	386	-7.256	27.619	53.863 1.00 34.93
	ATOM	1351	CD	GLN	386	-7.246	28.442	55.136 1.00 37.35
	ATOM	1352	OE1	GLN	386	-8.016	28.183	56.072 1.00 39.44
	ATOM	1353	NE2	GLN	386	-6.373	29.443	55.183 1.00 39.95
	ATOM	1354	C	GLN	386	-4.867	25.646	54.067 1.00 24.30
30	ATOM	1355	O	GLN	386	-4.561	24.727	53.318 1.00 25.10
	ATOM	1356	N	GLU	387	-4.140	26.752	54.182 1.00 25.50
	ATOM	1357	CA	GLU	387	-2.907	26.905	53.413 1.00 25.38
	ATOM	1358	CB	GLU	387	-2.358	28.328	53.594 1.00 29.21
	ATOM	1359	CG	GLU	387	-3.234	29.420	52.915 1.00 33.12
35	ATOM	1360	CD	GLU	387	-2.845	30.838	53.284 1.00 37.28
	ATOM	1361	OE1	GLU	387	-1.634	31.125	53.407 1.00 40.75
	ATOM	1362	OE2	GLU	387	-3.750	31.691	53.436 1.00 38.95
	ATOM	1363	C	GLU	387	-1.877	25.841	53.852 1.00 25.54
	ATOM	1364	O	GLU	387	-1.097	25.329	53.030 1.00 24.67
40	ATOM	1365	N	VAL	388	-1.897	25.476	55.132 1.00 24.28
	ATOM	1366	CA	VAL	388	-0.960	24.447	55.617 1.00 21.40
	ATOM	1367	CB	VAL	388	-0.845	24.439	57.168 1.00 19.68
	ATOM	1368	CG1	VAL	388	0.182	23.410	57.597 1.00 22.22
	ATOM	1369	CG2	VAL	388	-0.477	25.824	57.691 1.00 20.28
45	ATOM	1370	C	VAL	388	-1.444	23.076	55.178 1.00 22.10
	ATOM	1371	O	VAL	388	-0.666	22.211	54.782 1.00 21.10
	ATOM	1372	N	GLU	389	-2.750	22.859	55.243 1.00 22.00
	ATOM	1373	CA	GLU	389	-3.284	21.577	54.825 1.00 21.41
	ATOM	1374	CB	GLU	389	-4.801	21.538	54.987 1.00 22.76
50	ATOM	1375	CG	GLU	389	-5.358	20.146	54.988 1.00 31.47
	ATOM	1376	CD	GLU	389	-6.793	20.093	55.471 1.00 36.14
	ATOM	1377	OE1	GLU	389	-7.160	20.927	56.334 1.00 39.74
	ATOM	1378	OE2	GLU	389	-7.540	19.204	55.006 1.00 39.63
	ATOM	1379	C	GLU	389	-2.936	21.294	53.382 1.00 19.32
55	ATOM	1380	O	GLU	389	-2.653	20.155	53.025 1.00 21.32
	ATOM	1381	N	VAL	390	-3.001	22.313	52.534 1.00 19.72
	ATOM	1382	CA	VAL	390	-2.685	22.148	51.125 1.00 19.82
	ATOM	1383	CB	VAL	390	-2.950	23.447	50.316 1.00 19.77

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      ATOM  1384 CG1 VAL  390    -2.307 23.344 48.919 1.00 22.22
      ATOM  1385 CG2 VAL  390    -4.442 23.652 50.169 1.00 23.95
      ATOM  1386 C   VAL  390    -1.231 21.744 50.924 1.00 20.27
      ATOM  1387 O   VAL  390    -0.924 20.894 50.093 1.00 20.79
  5   ATOM  1388 N   LEU  391    -0.334 22.345 51.699 1.00 21.06
      ATOM  1389 CA  LEU  391     1.078 22.004 51.552 1.00 19.84
      ATOM  1390 CB  LEU  391     1.951 22.982 52.328 1.00 20.90
      ATOM  1391 CG  LEU  391     1.895 24.438 51.836 1.00 21.65
      ATOM  1392 CD1 LEU  391     2.846 25.283 52.673 1.00 23.70
  10  ATOM  1393 CD2 LEU  391     2.260 24.515 50.351 1.00 25.56
      ATOM  1394 C   LEU  391     1.327 20.583 52.031 1.00 19.59
      ATOM  1395 O   LEU  391     2.090 19.837 51.421 1.00 19.63
      ATOM  1396 N   ARG  392     0.680 20.192 53.130 0.50 19.30    AC1
      ATOM  1397 CA  ARG  392     0.862 18.823 53.628 0.50 19.65    AC1
  15  ATOM  1398 CB  ARG  392     0.212 18.620 55.016 0.50 19.22    AC1
      ATOM  1399 CG  ARG  392     0.060 17.123 55.382 0.50 18.74    AC1
      ATOM  1400 CD  ARG  392    -0.380 16.857 56.840 0.50 19.04    AC1
      ATOM  1401 NE  ARG  392     0.710 17.001 57.811 0.50 18.30    AC1
      ATOM  1402 CZ  ARG  392     0.739 16.427 59.020 0.50 18.32    AC1
  20  ATOM  1403 NH1 ARG  392    -0.262 15.660 59.432 0.50 18.09    AC1
      ATOM  1404 NH2 ARG  392     1.783 16.606 59.826 0.50 13.08    AC1
      ATOM  1405 C   ARG  392     0.259 17.833 52.624 0.50 19.79    AC1
      ATOM  1406 O   ARG  392     0.768 16.730 52.453 0.50 19.90    AC1
      ATOM  1407 N   GLU  393    -0.839 18.220 51.976 1.00 19.51
  25  ATOM  1408 CA  GLU  393    -1.484 17.355 50.979 1.00 21.32
      ATOM  1409 CB  GLU  393    -2.858 17.922 50.575 1.00 23.83
      ATOM  1410 CG  GLU  393    -3.631 17.066 49.588 1.00 29.44
      ATOM  1411 CD  GLU  393    -4.209 15.767 50.173 1.00 34.23
      ATOM  1412 OE1 GLU  393    -3.940 15.434 51.348 1.00 34.71
  30  ATOM  1413 OE2 GLU  393    -4.952 15.071 49.433 1.00 37.12
      ATOM  1414 C   GLU  393    -0.556 17.210 49.763 1.00 21.12
      ATOM  1415 O   GLU  393    -0.486 16.147 49.157 1.00 20.35
      ATOM  1416 N   LYS  394     0.143 18.287 49.395 1.00 19.98
      ATOM  1417 CA  LYS  394     1.102 18.186 48.302 1.00 21.24
  35  ATOM  1418 CB  LYS  394     1.787 19.519 48.048 1.00 22.05
      ATOM  1419 CG  LYS  394     0.903 20.468 47.258 1.00 24.02
      ATOM  1420 CD  LYS  394     1.608 21.778 46.964 1.00 25.62
      ATOM  1421 CE  LYS  394     0.690 22.711 46.199 1.00 28.47
      ATOM  1422 NZ  LYS  394     1.369 24.012 45.959 1.00 30.41
  40  ATOM  1423 C   LYS  394     2.153 17.137 48.667 1.00 22.08
      ATOM  1424 O   LYS  394     2.555 16.341 47.825 1.00 20.82
      ATOM  1425 N   MET  395     2.590 17.136 49.932 1.00 21.43
      ATOM  1426 CA  MET  395     3.607 16.166 50.369 1.00 21.13
      ATOM  1427 CB  MET  395     4.177 16.520 51.746 1.00 24.05
  45  ATOM  1428 CG  MET  395     5.100 17.680 51.738 1.00 24.66
      ATOM  1429 SD  MET  395     6.457 17.503 50.571 1.00 27.36
      ATOM  1430 CE  MET  395     6.985 15.797 50.738 1.00 23.91
      ATOM  1431 C   MET  395     3.121 14.744 50.417 1.00 20.46
      ATOM  1432 O   MET  395     3.872 13.832 50.095 1.00 22.42
  50  ATOM  1433 N   PHE  396     1.862 14.542 50.827 1.00 20.87
      ATOM  1434 CA  PHE  396     1.285 13.202 50.858 1.00 21.65
      ATOM  1435 CB  PHE  396    -0.176 13.203 51.374 1.00 20.90
      ATOM  1436 CG  PHE  396    -0.320 13.286 52.875 1.00 22.60
      ATOM  1437 CD1 PHE  396     0.733 12.996 53.727 1.00 22.79
  55  ATOM  1438 CD2 PHE  396    -1.544 13.640 53.436 1.00 23.58
      ATOM  1439 CE1 PHE  396     0.570 13.063 55.116 1.00 20.29
      ATOM  1440 CE2 PHE  396    -1.712 13.702 54.826 1.00 23.72
      ATOM  1441 CZ  PHE  396    -0.655 13.416 55.669 1.00 22.24
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        ATOM  1442 C   PHE  396     1.281 12.652 49.429 1.00 22.43
        ATOM  1443 O   PHE  396     1.635 11.494 49.215 1.00 21.80
        ATOM  1444 N   LEU  397     0.844 13.462 48.458 1.00 22.96
        ATOM  1445 CA  LEU  397     0.813 13.022 47.061 1.00 21.97
  5     ATOM  1446 CB  LEU  397     0.139 14.099 46.176 1.00 22.88
        ATOM  1447 CG  LEU  397    -1.385 14.161 46.354 1.00 23.93
        ATOM  1448 CD1 LEU  397    -1.981 15.078 45.315 1.00 25.27
        ATOM  1449 CD2 LEU  397    -1.972 12.759 46.190 1.00 25.99
        ATOM  1450 C   LEU  397     2.233 12.705 46.560 1.00 24.94
  10    ATOM  1451 O   LEU  397     2.450 11.692 45.873 1.00 25.61
        ATOM  1452 N   CYS  398     3.195 13.548 46.924 1.00 23.80
        ATOM  1453 CA  CYS  398     4.593 13.333 46.519 1.00 26.51
        ATOM  1454 CB  CYS  398     5.509 14.454 47.041 1.00 28.87
        ATOM  1455 SG  CYS  398     5.551 15.910 46.032 1.00 39.48
  15    ATOM  1456 C   CYS  398     5.111 12.027 47.090 1.00 25.35
        ATOM  1457 O   CYS  398     5.738 11.221 46.399 1.00 25.03
        ATOM  1458 N   LEU  399     4.861 11.821 48.371 1.00 24.81
        ATOM  1459 CA  LEU  399     5.366 10.620 49.009 1.00 24.04
        ATOM  1460 CB  LEU  399     5.232 10.739 50.530 1.00 24.26
  20    ATOM  1461 CG  LEU  399     5.806  9.580 51.344 1.00 24.01
        ATOM  1462 CD1 LEU  399     7.281  9.343 50.985 1.00 22.08
        ATOM  1463 CD2 LEU  399     5.672  9.931 52.821 1.00 22.85
        ATOM  1464 C   LEU  399     4.715  9.352 48.518 1.00 26.35
        ATOM  1465 O   LEU  399     5.398  8.363 48.267 1.00 25.02
  25    ATOM  1466 N   ASP  400     3.391  9.377 48.361 1.00 27.30
        ATOM  1467 CA  ASP  400     2.680  8.200 47.874 1.00 29.09
        ATOM  1468 CB  ASP  400     1.179  8.490 47.772 1.00 31.25
        ATOM  1469 CG  ASP  400     0.379  7.258 47.400 1.00 34.75
        ATOM  1470 OD1 ASP  400     0.236  6.356 48.252 1.00 35.16
  30    ATOM  1471 OD2 ASP  400    -0.091  7.188 46.250 1.00 38.49
        ATOM  1472 C   ASP  400     3.217  7.816 46.497 1.00 28.91
        ATOM  1473 O   ASP  400     3.436  6.642 46.212 1.00 29.66
        ATOM  1474 N   GLU  401     3.420  8.813 45.644 1.00 28.16
        ATOM  1475 CA  GLU  401     3.936  8.577 44.299 1.00 29.87
  35    ATOM  1476 CB  GLU  401     4.052  9.895 43.533 1.00 32.50
        ATOM  1477 CG  GLU  401     4.735  9.751 42.180 1.00 38.83
        ATOM  1478 CD  GLU  401     4.784 11.048 41.406 1.00 42.93
        ATOM  1479 OE1 GLU  401     5.449 12.003 41.865 1.00 45.46
        ATOM  1480 OE2 GLU  401     4.147 11.114 40.334 1.00 45.87
  40    ATOM  1481 C   GLU  401     5.308  7.911 44.360 1.00 31.19
        ATOM  1482 O   GLU  401     5.574  6.926 43.650 1.00 31.37
        ATOM  1483 N   TYR  402     6.171  8.444 45.224 1.00 28.55
        ATOM  1484 CA  TYR  402     7.516  7.918 45.365 1.00 29.01
        ATOM  1485 CB  TYR  402     8.314  8.737 46.384 1.00 27.40
  45    ATOM  1486 CG  TYR  402     9.667  8.134 46.659 1.00 27.45
        ATOM  1487 CD1 TYR  402     9.849  7.238 47.709 1.00 27.18
        ATOM  1488 CE1 TYR  402    11.087  6.635 47.933 1.00 28.15
        ATOM  1489 CD2 TYR  402    10.747  8.419 45.834 1.00 27.22
        ATOM  1490 CE2 TYR  402    11.996  7.820 46.050 1.00 30.03
  50    ATOM  1491 CZ  TYR  402    12.147  6.936 47.097 1.00 30.78
        ATOM  1492 OH  TYR  402    13.374  6.358 47.316 1.00 31.66
        ATOM  1493 C   TYR  402     7.503  6.453 45.769 1.00 30.16
        ATOM  1494 O   TYR  402     8.206  5.641 45.187 1.00 29.67
        ATOM  1495 N   CYS  403     6.700  6.113 46.763 1.00 30.42
  55    ATOM  1496 CA  CYS  403     6.616  4.739 47.215 1.00 34.32
        ATOM  1497 CB  CYS  403     5.691  4.650 48.430 1.00 33.37
        ATOM  1498 SG  CYS  403     6.357  5.485 49.920 1.00 31.63
        ATOM  1499 C   CYS  403     6.116  3.820 46.104 1.00 36.81
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      ATOM 1500 O   CYS  403      6.612  2.703 45.936 1.00 36.95
      ATOM 1501 N   ARG  404      5.140  4.289 45.335 1.00 39.50
      ATOM 1502 CA  ARG  404      4.597  3.453 44.271 1.00 42.67
      ATOM 1503 CB  ARG  404      3.280  4.045 43.746 1.00 43.44
   5  ATOM 1504 CG  ARG  404      2.135  3.802 44.718 1.00 46.08
      ATOM 1505 CD  ARG  404      0.746  4.164 44.188 1.00 46.89
      ATOM 1506 NE  ARG  404      0.490  5.602 44.159 1.00 46.69
      ATOM 1507 CZ  ARG  404      0.733  6.386 43.116 1.00 47.48
      ATOM 1508 NH1 ARG  404      1.241  5.874 42.002 1.00 48.94
  10  ATOM 1509 NH2 ARG  404      0.462  7.684 43.181 1.00 48.22
      ATOM 1510 C   ARG  404      5.578  3.206 43.137 1.00 43.67
      ATOM 1511 O   ARG  404      5.640  2.102 42.598 1.00 44.97
      ATOM 1512 N   ARG  405      6.356  4.220 42.785 1.00 45.45
      ATOM 1513 CA  ARG  405      7.330  4.098 41.710 1.00 47.72
  15  ATOM 1514 CB  ARG  405      7.700  5.481 41.167 1.00 49.80
      ATOM 1515 CG  ARG  405      6.535  6.298 40.624 1.00 53.09
      ATOM 1516 CD  ARG  405      7.005  7.695 40.233 1.00 56.62
      ATOM 1517 NE  ARG  405      5.931  8.506 39.661 1.00 59.35
      ATOM 1518 CZ  ARG  405      5.356  8.263 38.488 1.00 60.20
  20  ATOM 1519 NH1 ARG  405      5.753  7.231 37.756 1.00 61.80
      ATOM 1520 NH2 ARG  405      4.382  9.049 38.046 1.00 60.75
      ATOM 1521 C   ARG  405      8.609  3.410 42.166 1.00 48.23
      ATOM 1522 O   ARG  405      9.078  2.464 41.528 1.00 48.90
      ATOM 1523 N   SER  406      9.163  3.891 43.278 1.00 47.66
  25  ATOM 1524 CA  SER  406     10.421  3.382 43.819 1.00 48.66
      ATOM 1525 CB  SER  406     11.099  4.477 44.638 1.00 49.49
      ATOM 1526 OG  SER  406     11.118  5.698 43.919 1.00 51.64
      ATOM 1527 C   SER  406     10.336  2.112 44.656 1.00 48.77
      ATOM 1528 O   SER  406     11.355  1.507 44.968 1.00 48.91
  30  ATOM 1529 N   ARG  407      9.129  1.711 45.026 1.00 49.27
      ATOM 1530 CA  ARG  407      8.948  0.500 45.813 1.00 50.47
      ATOM 1531 CB  ARG  407      9.106  0.811 47.302 1.00 52.25
      ATOM 1532 CG  ARG  407     10.476  0.434 47.849 1.00 54.88
      ATOM 1533 CD  ARG  407     10.942  1.401 48.918 1.00 55.39
  35  ATOM 1534 NE  ARG  407     12.157  0.927 49.573 1.00 56.11
      ATOM 1535 CZ  ARG  407     12.885  1.653 50.416 1.00 56.40
      ATOM 1536 NH1 ARG  407     12.524  2.895 50.707 1.00 56.21
      ATOM 1537 NH2 ARG  407     13.973  1.133 50.972 1.00 55.90
      ATOM 1538 C   ARG  407      7.586 -0.110 45.535 1.00 50.00
  40  ATOM 1539 O   ARG  407      6.847 -0.468 46.451 1.00 50.06
      ATOM 1540 N   SER  408      7.279 -0.233 44.248 1.00 49.76
      ATOM 1541 CA  SER  408      6.010 -0.777 43.782 1.00 49.98
      ATOM 1542 CB  SER  408      6.060 -0.957 42.262 1.00 50.23
      ATOM 1543 OG  SER  408      7.129 -1.806 41.880 1.00 50.48
  45  ATOM 1544 C   SER  408      5.622 -2.100 44.439 1.00 49.86
      ATOM 1545 O   SER  408      4.444 -2.354 44.698 1.00 50.10
      ATOM 1546 N   SER  409      6.620 -2.933 44.706 1.00 50.01
      ATOM 1547 CA  SER  409      6.412 -4.245 45.307 1.00 49.71
      ATOM 1548 CB  SER  409      7.704 -5.055 45.217 1.00 50.85
  50  ATOM 1549 OG  SER  409      8.799 -4.306 45.730 1.00 52.55
      ATOM 1550 C   SER  409      5.954 -4.195 46.758 1.00 49.15
      ATOM 1551 O   SER  409      5.476 -5.195 47.300 1.00 48.48
      ATOM 1552 N   GLU  410      6.095 -3.035 47.392 1.00 47.66
      ATOM 1553 CA  GLU  410      5.701 -2.912 48.785 1.00 45.50
  55  ATOM 1554 CB  GLU  410      6.787 -2.197 49.577 1.00 46.29
      ATOM 1555 CG  GLU  410      8.079 -2.980 49.712 1.00 47.76
      ATOM 1556 CD  GLU  410      9.074 -2.261 50.592 1.00 48.13
      ATOM 1557 OE1 GLU  410     10.155 -1.882 50.092 1.00 49.66
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        ATOM  1558 OE2 GLU  410     8.761 -2.063 51.784 1.00 48.57
        ATOM  1559 C   GLU  410     4.373 -2.197 48.973 1.00 44.10
        ATOM  1560 O   GLU  410     4.311 -0.974 49.114 1.00 41.70
        ATOM  1561 N   GLU  411     3.306 -2.985 48.986 1.00 42.76
  5     ATOM  1562 CA  GLU  411     1.973 -2.451 49.154 1.00 41.57
        ATOM  1563 CB  GLU  411     0.945 -3.529 48.814 1.00 44.42
        ATOM  1564 CG  GLU  411     1.166 -4.132 47.439 1.00 48.49
        ATOM  1565 CD  GLU  411     0.151 -5.191 47.100 1.00 49.60
        ATOM  1566 OE1 GLU  411     0.111 -6.226 47.806 1.00 49.80
 10     ATOM  1567 OE2 GLU  411    -0.605 -4.979 46.129 1.00 50.58
        ATOM  1568 C   GLU  411     1.805 -2.000 50.594 1.00 38.78
        ATOM  1569 O   GLU  411     2.254 -2.682 51.526 1.00 38.53
        ATOM  1570 N   GLY  412     1.170 -0.845 50.768 1.00 34.78
        ATOM  1571 CA  GLY  412     0.953 -0.313 52.103 1.00 32.19
 15     ATOM  1572 C   GLY  412     2.163  0.402 52.695 1.00 29.28
        ATOM  1573 O   GLY  412     2.133  0.770 53.865 1.00 28.68
        ATOM  1574 N   ARG  413     3.207  0.625 51.901 1.00 28.70
        ATOM  1575 CA  ARG  413     4.413  1.286 52.407 1.00 27.65
        ATOM  1576 CB  ARG  413     5.513  1.319 51.348 1.00 29.50
 20     ATOM  1577 CG  ARG  413     6.850  1.839 51.905 1.00 29.56
        ATOM  1578 CD  ARG  413     8.004  1.721 50.903 1.00 32.68
        ATOM  1579 NE  ARG  413     9.242  2.244 51.484 1.00 34.48
        ATOM  1580 CZ  ARG  413     9.951  1.632 52.433 1.00 35.49
        ATOM  1581 NH1 ARG  413     9.569  0.454 52.914 1.00 34.87
 25     ATOM  1582 NH2 ARG  413    11.036  2.221 52.929 1.00 35.73
        ATOM  1583 C   ARG  413     4.153  2.715 52.874 1.00 27.61
        ATOM  1584 O   ARG  413     4.656  3.142 53.911 1.00 26.64
        ATOM  1585 N   PHE  414     3.377  3.447 52.091 1.00 27.23
        ATOM  1586 CA  PHE  414     3.025  4.829 52.406 1.00 25.72
 30     ATOM  1587 CB  PHE  414     2.109  5.368 51.290 1.00 27.69
        ATOM  1588 CG  PHE  414     1.553  6.756 51.552 1.00 26.95
        ATOM  1589 CD1 PHE  414     2.359  7.882 51.454 1.00 28.43
        ATOM  1590 CD2 PHE  414     0.217  6.921 51.891 1.00 29.19
        ATOM  1591 CE1 PHE  414     1.842  9.165 51.692 1.00 28.49
 35     ATOM  1592 CE2 PHE  414    -0.315  8.199 52.134 1.00 29.46
        ATOM  1593 CZ  PHE  414     0.503  9.325 52.033 1.00 28.75
        ATOM  1594 C   PHE  414     2.336  4.891 53.777 1.00 26.40
        ATOM  1595 O   PHE  414     2.691  5.702 54.637 1.00 26.65
        ATOM  1596 N   ALA  415     1.355  4.027 53.997 1.00 25.07
 40     ATOM  1597 CA  ALA  415     0.652  4.002 55.271 1.00 24.63
        ATOM  1598 CB  ALA  415    -0.531  3.028 55.193 1.00 23.72
        ATOM  1599 C   ALA  415     1.572  3.622 56.436 1.00 24.02
        ATOM  1600 O   ALA  415     1.433  4.142 57.547 1.00 23.15
        ATOM  1601 N   ALA  416     2.518  2.722 56.174 1.00 24.35
 45     ATOM  1602 CA  ALA  416     3.448  2.270 57.205 1.00 24.54
        ATOM  1603 CB  ALA  416     4.313  1.143 56.666 1.00 24.42
        ATOM  1604 C   ALA  416     4.319  3.436 57.639 1.00 23.97
        ATOM  1605 O   ALA  416     4.544  3.646 58.832 1.00 25.89
        ATOM  1606 N   LEU  417     4.799  4.192 56.664 1.00 23.99
 50     ATOM  1607 CA  LEU  417     5.638  5.348 56.952 1.00 23.65
        ATOM  1608 CB  LEU  417     6.056  6.013 55.651 1.00 23.88
        ATOM  1609 CG  LEU  417     6.940  5.132 54.768 1.00 22.81
        ATOM  1610 CD1 LEU  417     7.104  5.745 53.381 1.00 25.97
        ATOM  1611 CD2 LEU  417     8.313  4.978 55.464 1.00 24.86
 55     ATOM  1612 C   LEU  417     4.894  6.346 57.843 1.00 23.64
        ATOM  1613 O   LEU  417     5.434  6.825 58.851 1.00 24.26
        ATOM  1614 N   LEU  418     3.635  6.632 57.517 1.00 22.96
        ATOM  1615 CA  LEU  418     2.896  7.617 58.305 1.00 22.78
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	ATOM	1616	CB	LEU	418	1.555	7.961	57.622	1.00	22.19
	ATOM	1617	CG	LEU	418	1.632	8.536	56.193	1.00	22.93
	ATOM	1618	CD1	LEU	418	0.232	8.983	55.715	1.00	23.88
	ATOM	1619	CD2	LEU	418	2.554	9.749	56.179	1.00	23.65
5	ATOM	1620	C	LEU	418	2.646	7.201	59.762	1.00	24.12
	ATOM	1621	O	LEU	418	2.372	8.046	60.620	1.00	22.61
	ATOM	1622	N	LEU	419	2.706	5.901	60.049	1.00	25.06
	ATOM	1623	CA	LEU	419	2.496	5.440	61.404	1.00	27.92
	ATOM	1624	CB	LEU	419	2.406	3.909	61.451	1.00	31.65
10	ATOM	1625	CG	LEU	419	1.114	3.343	60.884	1.00	34.11
	ATOM	1626	CD1	LEU	419	1.026	1.848	61.218	1.00	36.06
	ATOM	1627	CD2	LEU	419	-0.068	4.081	61.480	1.00	34.83
	ATOM	1628	C	LEU	419	3.594	5.891	62.360	1.00	29.85
	ATOM	1629	O	LEU	419	3.400	5.885	63.574	1.00	31.55
15	ATOM	1630	N	ARG	420	4.736	6.296	61.828	1.00	31.33
	ATOM	1631	CA	ARG	420	5.801	6.725	62.718	1.00	31.87
	ATOM	1632	CB	ARG	420	7.145	6.755	61.985	1.00	32.74
	ATOM	1633	CG	ARG	420	7.648	5.387	61.490	1.00	33.67
	ATOM	1634	CD	ARG	420	7.856	4.364	62.622	1.00	36.93
20	ATOM	1635	NE	ARG	420	6.709	3.481	62.820	1.00	35.35
	ATOM	1636	CZ	ARG	420	6.179	3.194	64.003	1.00	37.82
	ATOM	1637	NH1	ARG	420	6.692	3.714	65.116	1.00	39.26
	ATOM	1638	NH2	ARG	420	5.112	2.408	64.079	1.00	39.04
	ATOM	1639	C	ARG	420	5.477	8.092	63.303	1.00	32.15
25	ATOM	1640	O	ARG	420	5.995	8.456	64.362	1.00	31.60
	ATOM	1641	N	LEU	421	4.591	8.845	62.655	1.00	30.38
	ATOM	1642	CA	LEU	421	4.278	10.175	63.164	1.00	29.53
	ATOM	1643	CB	LEU	421	3.519	10.976	62.121	1.00	30.72
	ATOM	1644	CG	LEU	421	4.322	11.027	60.808	1.00	31.31
30	ATOM	1645	CD1	LEU	421	3.645	12.019	59.885	1.00	32.38
	ATOM	1646	CD2	LEU	421	5.800	11.411	61.053	1.00	31.74
	ATOM	1647	C	LEU	421	3.582	10.256	64.521	1.00	28.39
	ATOM	1648	O	LEU	421	3.977	11.061	65.363	1.00	26.36
	ATOM	1649	N	PRO	422	2.533	9.446	64.762	1.00	27.69
35	ATOM	1650	CD	PRO	422	1.678	8.672	63.839	1.00	27.47
	ATOM	1651	CA	PRO	422	1.915	9.559	66.090	1.00	26.04
	ATOM	1652	CB	PRO	422	0.717	8.603	66.005	1.00	28.29
	ATOM	1653	CG	PRO	422	0.350	8.664	64.557	1.00	28.91
	ATOM	1654	C	PRO	422	2.906	9.143	67.198	1.00	25.36
40	ATOM	1655	O	PRO	422	2.832	9.637	68.322	1.00	24.06
	ATOM	1656	N	ALA	423	3.821	8.228	66.872	1.00	24.34
	ATOM	1657	CA	ALA	423	4.817	7.779	67.840	1.00	22.88
	ATOM	1658	CB	ALA	423	5.589	6.599	67.273	1.00	26.29
	ATOM	1659	C	ALA	423	5.765	8.942	68.158	1.00	24.20
45	ATOM	1660	O	ALA	423	6.094	9.197	69.315	1.00	22.14
	ATOM	1661	N	LEU	424	6.212	9.640	67.119	1.00	22.92
	ATOM	1662	CA	LEU	424	7.103	10.773	67.309	1.00	22.78
	ATOM	1663	CB	LEU	424	7.512	11.306	65.936	1.00	23.40
	ATOM	1664	CG	LEU	424	8.405	12.531	65.875	1.00	24.54
50	ATOM	1665	CD1	LEU	424	9.777	12.226	66.517	1.00	22.52
	ATOM	1666	CD2	LEU	424	8.589	12.892	64.405	1.00	22.78
	ATOM	1667	C	LEU	424	6.422	11.861	68.153	1.00	22.46
	ATOM	1668	O	LEU	424	7.036	12.468	69.038	1.00	21.68
	ATOM	1669	N	ARG	425	5.136	12.101	67.900	1.00	22.38
55	ATOM	1670	CA	ARG	425	4.386	13.095	68.663	1.00	23.67
	ATOM	1671	CB	ARG	425	2.969	13.240	68.087	1.00	26.56
	ATOM	1672	CG	ARG	425	2.066	14.140	68.903	1.00	30.90
	ATOM	1673	CD	ARG	425	0.977	14.732	68.031	1.00	36.25

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      ATOM  1674 NE  ARG  425      0.469 13.774 67.044 1.00 40.86
      ATOM  1675 CZ  ARG  425     -0.070 12.592 67.339 1.00 42.76
      ATOM  1676 NH1 ARG  425     -0.183 12.196 68.604 1.00 46.63
      ATOM  1677 NH2 ARG  425     -0.498 11.800 66.367 1.00 44.97
   5  ATOM  1678 C   ARG  425      4.309 12.737 70.150 1.00 21.12
      ATOM  1679 O   ARG  425      4.418 13.604 71.021 1.00 21.30
      ATOM  1680 N   SER  426      4.124 11.452 70.436 1.00 19.60
      ATOM  1681 CA  SER  426      4.021 10.989 71.820 1.00 19.49
      ATOM  1682 CB  SER  426      3.534  9.539 71.855 1.00 20.63
  10  ATOM  1683 OG  SER  426      3.491  9.086 73.198 1.00 23.17
      ATOM  1684 C   SER  426      5.374 11.096 72.535 1.00 17.38
      ATOM  1685 O   SER  426      5.458 11.496 73.698 1.00 18.97
      ATOM  1686 N   ILE  427      6.419 10.742 71.812 1.00 18.11
      ATOM  1687 CA  ILE  427      7.770 10.812 72.368 1.00 15.88
  15  ATOM  1688 CB  ILE  427      8.763 10.095 71.449 1.00 15.75
      ATOM  1689 CG2 ILE  427     10.213 10.351 71.913 1.00 17.78
      ATOM  1690 CG1 ILE  427      8.479  8.591 71.526 1.00 18.23
      ATOM  1691 CD1 ILE  427      9.082  7.789 70.440 1.00 20.33
      ATOM  1692 C   ILE  427      8.146 12.272 72.599 1.00 16.69
  20  ATOM  1693 O   ILE  427      8.779 12.589 73.606 1.00 16.41
      ATOM  1694 N   SER  428      7.767 13.159 71.685 1.00 17.02
      ATOM  1695 CA  SER  428      8.059 14.590 71.884 1.00 17.37
      ATOM  1696 CB  SER  428      7.636 15.393 70.633 1.00 18.11
      ATOM  1697 OG  SER  428      7.745 16.794 70.876 1.00 19.14
  25  ATOM  1698 C   SER  428      7.377 15.138 73.154 1.00 18.08
      ATOM  1699 O   SER  428      7.968 15.916 73.928 1.00 16.98
      ATOM  1700 N   LEU  429      6.134 14.741 73.425 1.00 18.84
      ATOM  1701 CA  LEU  429      5.518 15.249 74.633 1.00 19.23
      ATOM  1702 CB  LEU  429      4.054 14.807 74.723 1.00 22.17
  30  ATOM  1703 CG  LEU  429      3.187 15.432 73.625 1.00 25.96
      ATOM  1704 CD1 LEU  429      1.800 14.809 73.624 1.00 28.92
      ATOM  1705 CD2 LEU  429      3.087 16.943 73.855 1.00 29.57
      ATOM  1706 C   LEU  429      6.296 14.782 75.860 1.00 17.99
      ATOM  1707 O   LEU  429      6.465 15.527 76.816 1.00 18.52
  35  ATOM  1708 N   LYS  430      6.778 13.544 75.830 1.00 18.39
      ATOM  1709 CA  LYS  430      7.540 13.047 76.957 1.00 17.66
      ATOM  1710 CB  LYS  430      7.780 11.544 76.826 1.00 19.73
      ATOM  1711 CG  LYS  430      8.539 10.975 78.020 1.00 23.74
      ATOM  1712 CD  LYS  430      7.625 11.004 79.260 1.00 27.95
  40  ATOM  1713 CE  LYS  430      8.192 10.194 80.414 1.00 34.36
      ATOM  1714 NZ  LYS  430      7.167 10.122 81.490 1.00 36.64
      ATOM  1715 C   LYS  430      8.865 13.795 77.077 1.00 18.37
      ATOM  1716 O   LYS  430      9.346 14.034 78.191 1.00 18.47
      ATOM  1717 N   SER  431      9.435 14.174 75.936 0.50 17.09  AC1
  45  ATOM  1718 CA  SER  431     10.693 14.931 75.919 0.50 18.08  AC1
      ATOM  1719 CB  SER  431     11.102 15.238 74.471 0.50 17.50  AC1
      ATOM  1720 OG  SER  431     12.180 16.159 74.413 0.50 19.63  AC1
      ATOM  1721 C   SER  431     10.472 16.244 76.663 0.50 18.02  AC1
      ATOM  1722 O   SER  431     11.297 16.668 77.464 0.50 17.75  AC1
  50  ATOM  1723 N   PHE  432      9.326 16.875 76.415 1.00 17.68
      ATOM  1724 CA  PHE  432      9.020 18.162 77.057 1.00 17.81
      ATOM  1725 CB  PHE  432      7.778 18.817 76.425 1.00 18.74
      ATOM  1726 CG  PHE  432      8.099 19.713 75.249 1.00 17.54
      ATOM  1727 CD1 PHE  432      8.649 20.976 75.448 1.00 18.72
  55  ATOM  1728 CD2 PHE  432      7.851 19.290 73.958 1.00 17.78
      ATOM  1729 CE1 PHE  432      8.941 21.800 74.351 1.00 18.20
      ATOM  1730 CE2 PHE  432      8.135 20.093 72.863 1.00 18.04
      ATOM  1731 CZ  PHE  432      8.684 21.358 73.060 1.00 19.15
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        ATOM  1732 C   PHE   432        8.817 17.989 78.550 1.00 18.32
        ATOM  1733 O   PHE   432        9.170 18.872 79.330 1.00 20.66
        ATOM  1734 N   GLU   433        8.249 16.852 78.964 1.00 17.15
        ATOM  1735 CA  GLU   433        8.073 16.592 80.382 1.00 20.50
    5   ATOM  1736 CB  GLU   433        7.520 15.192 80.613 1.00 19.84
        ATOM  1737 CG  GLU   433        6.045 15.053 80.320 1.00 27.71
        ATOM  1738 CD  GLU   433        5.533 13.688 80.744 1.00 31.07
        ATOM  1739 OE1 GLU   433        5.964 13.224 81.823 1.00 34.98
        ATOM  1740 OE2 GLU   433        4.714 13.094 80.006 1.00 34.76
   10   ATOM  1741 C   GLU   433        9.437 16.691 81.052 1.00 19.32
        ATOM  1742 O   GLU   433        9.574 17.322 82.106 1.00 20.27
        ATOM  1743 N   HIS   434       10.438 16.059 80.435 1.00 18.45
        ATOM  1744 CA  HIS   434       11.810 16.086 80.972 1.00 19.10
        ATOM  1745 CB  HIS   434       12.708 15.091 80.247 1.00 20.67
   15   ATOM  1746 CG  HIS   434       12.346 13.662 80.495 1.00 21.88
        ATOM  1747 CD2 HIS   434       12.196 12.621 79.642 1.00 22.64
        ATOM  1748 ND1 HIS   434       12.153 13.151 81.763 1.00 24.64
        ATOM  1749 CE1 HIS   434       11.901 11.857 81.678 1.00 26.38
        ATOM  1750 NE2 HIS   434       11.924 11.509 80.403 1.00 25.49
   20   ATOM  1751 C   HIS   434       12.448 17.471 80.900 1.00 19.47
        ATOM  1752 O   HIS   434       13.029 17.930 81.868 1.00 20.51
        ATOM  1753 N   LEU   435       12.360 18.122 79.749 1.00 17.30
        ATOM  1754 CA  LEU   435       12.926 19.464 79.614 1.00 17.70
        ATOM  1755 CB  LEU   435       12.660 20.017 78.219 1.00 17.54
   25   ATOM  1756 CG  LEU   435       13.350 19.239 77.100 1.00 17.06
        ATOM  1757 CD1 LEU   435       12.933 19.793 75.764 1.00 19.34
        ATOM  1758 CD2 LEU   435       14.874 19.343 77.242 1.00 19.09
        ATOM  1759 C   LEU   435       12.334 20.411 80.653 1.00 17.96
        ATOM  1760 O   LEU   435       13.034 21.260 81.193 1.00 18.73
   30   ATOM  1761 N   PHE   436       11.035 20.302 80.921 1.00 17.35
        ATOM  1762 CA  PHE   436       10.460 21.192 81.936 1.00 18.85
        ATOM  1763 CB  PHE   436        8.920 21.188 81.897 1.00 19.91
        ATOM  1764 CG  PHE   436        8.340 21.916 80.720 1.00 22.43
        ATOM  1765 CD1 PHE   436        8.885 23.113 80.288 1.00 23.77
   35   ATOM  1766 CD2 PHE   436        7.243 21.399 80.040 1.00 23.20
        ATOM  1767 CE1 PHE   436        8.353 23.783 79.202 1.00 25.60
        ATOM  1768 CE2 PHE   436        6.703 22.063 78.942 1.00 22.41
        ATOM  1769 CZ  PHE   436        7.250 23.249 78.521 1.00 26.06
        ATOM  1770 C   PHE   436       10.916 20.802 83.332 1.00 20.10
   40   ATOM  1771 O   PHE   436       11.195 21.670 84.161 1.00 22.89
        ATOM  1772 N   PHE   437       11.001 19.500 83.605 1.00 19.98
        ATOM  1773 CA  PHE   437       11.412 19.023 84.922 1.00 21.11
        ATOM  1774 CB  PHE   437       11.364 17.484 84.974 1.00 21.57
        ATOM  1775 CG  PHE   437       11.628 16.913 86.339 1.00 25.91
   45   ATOM  1776 CD1 PHE   437       10.633 16.924 87.313 1.00 27.17
        ATOM  1777 CD2 PHE   437       12.881 16.419 86.665 1.00 27.22
        ATOM  1778 CE1 PHE   437       10.891 16.447 88.599 1.00 30.66
        ATOM  1779 CE2 PHE   437       13.153 15.942 87.944 1.00 31.40
        ATOM  1780 CZ  PHE   437       12.158 15.957 88.910 1.00 29.78
   50   ATOM  1781 C   PHE   437       12.807 19.496 85.305 1.00 22.67
        ATOM  1782 O   PHE   437       13.046 19.895 86.464 1.00 24.17
        ATOM  1783 N   PHE   438       13.724 19.453 84.346 1.00 19.58
        ATOM  1784 CA  PHE   438       15.103 19.888 84.567 1.00 22.15
        ATOM  1785 CB  PHE   438       16.038 19.027 83.718 1.00 22.90
   55   ATOM  1786 CG  PHE   438       16.093 17.595 84.171 1.00 23.82
        ATOM  1787 CD1 PHE   438       16.725 17.262 85.361 1.00 24.00
        ATOM  1788 CD2 PHE   438       15.509 16.584 83.419 1.00 27.39
        ATOM  1789 CE1 PHE   438       16.773 15.942 85.795 1.00 25.11
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     ATOM 1790 CE2 PHE  438      15.557 15.253 83.847 1.00 27.37
     ATOM 1791 CZ  PHE  438      16.188 14.935 85.033 1.00 27.90
     ATOM 1792 C   PHE  438      15.334 21.383 84.256 1.00 21.04
     ATOM 1793 O   PHE  438      16.454 21.875 84.352 1.00 22.98
  5  ATOM 1794 N   HIS  439      14.267 22.077 83.867 1.00 19.84
     ATOM 1795 CA  HIS  439      14.311 23.503 83.508 1.00 19.79
     ATOM 1796 CB  HIS  439      14.550 24.380 84.742 1.00 21.68
     ATOM 1797 CG  HIS  439      13.463 24.294 85.763 1.00 24.96
     ATOM 1798 CD2 HIS  439      12.345 25.037 85.939 1.00 27.66
 10  ATOM 1799 ND1 HIS  439      13.440 23.331 86.747 1.00 26.44
     ATOM 1800 CE1 HIS  439      12.353 23.481 87.481 1.00 27.37
     ATOM 1801 NE2 HIS  439      11.672 24.511 87.012 1.00 28.08
     ATOM 1802 C   HIS  439      15.375 23.803 82.469 1.00 20.93
     ATOM 1803 O   HIS  439      16.185 24.726 82.626 1.00 23.42
 15  ATOM 1804 N   LEU  440      15.318 23.068 81.366 1.00 16.51
     ATOM 1805 CA  LEU  440      16.289 23.200 80.301 1.00 18.97
     ATOM 1806 CB  LEU  440      16.820 21.813 79.917 1.00 19.31
     ATOM 1807 CG  LEU  440      17.585 21.101 81.017 1.00 21.82
     ATOM 1808 CD1 LEU  440      17.920 19.672 80.567 1.00 24.43
 20  ATOM 1809 CD2 LEU  440      18.839 21.874 81.341 1.00 21.97
     ATOM 1810 C   LEU  440      15.751 23.859 79.042 1.00 20.05
     ATOM 1811 O   LEU  440      16.497 24.030 78.099 1.00 21.82
     ATOM 1812 N   VAL  441      14.478 24.229 79.038 1.00 19.87
     ATOM 1813 CA  VAL  441      13.879 24.814 77.833 1.00 21.84
 25  ATOM 1814 CB  VAL  441      12.795 23.830 77.247 1.00 22.63
     ATOM 1815 CG1 VAL  441      11.601 23.713 78.192 1.00 22.79
     ATOM 1816 CG2 VAL  441      12.365 24.276 75.855 1.00 24.87
     ATOM 1817 C   VAL  441      13.306 26.224 78.045 1.00 22.01
     ATOM 1818 O   VAL  441      12.587 26.478 79.009 1.00 20.37
 30  ATOM 1819 N   ALA  442      13.646 27.122 77.120 1.00 23.96
     ATOM 1820 CA  ALA  442      13.233 28.529 77.172 1.00 27.08
     ATOM 1821 CB  ALA  442      14.246 29.393 76.392 1.00 28.21
     ATOM 1822 C   ALA  442      11.846 28.718 76.591 1.00 28.96
     ATOM 1823 O   ALA  442      11.655 29.494 75.658 1.00 30.12
 35  ATOM 1824 N   ASP  443      10.895 28.011 77.178 1.00 30.46
     ATOM 1825 CA  ASP  443       9.493 27.994 76.764 1.00 31.83
     ATOM 1826 CB  ASP  443       8.678 27.367 77.906 1.00 33.17
     ATOM 1827 CG  ASP  443       7.208 27.218 77.581 1.00 34.98
     ATOM 1828 OD1 ASP  443       6.856 26.945 76.404 1.00 37.47
 40  ATOM 1829 OD2 ASP  443       6.404 27.346 78.524 1.00 31.58
     ATOM 1830 C   ASP  443       8.873 29.320 76.318 1.00 31.97
     ATOM 1831 O   ASP  443       8.426 29.453 75.180 1.00 30.41
     ATOM 1832 N   THR  444       8.854 30.304 77.205 1.00 32.53
     ATOM 1833 CA  THR  444       8.236 31.586 76.891 1.00 32.98
 45  ATOM 1834 CB  THR  444       7.965 32.371 78.198 1.00 34.53
     ATOM 1835 OG1 THR  444       9.196 32.581 78.900 1.00 37.04
     ATOM 1836 CG2 THR  444       7.020 31.577 79.102 1.00 35.95
     ATOM 1837 C   THR  444       8.981 32.486 75.901 1.00 32.99
     ATOM 1838 O   THR  444       8.399 33.436 75.370 1.00 32.71
 50  ATOM 1839 N   SER  445      10.248 32.179 75.639 1.00 30.56
     ATOM 1840 CA  SER  445      11.071 32.977 74.727 1.00 29.90
     ATOM 1841 CB  SER  445      12.481 33.132 75.313 1.00 29.52
     ATOM 1842 OG  SER  445      12.418 33.766 76.576 1.00 31.76
     ATOM 1843 C   SER  445      11.199 32.429 73.308 1.00 29.39
 55  ATOM 1844 O   SER  445      11.580 33.153 72.387 1.00 28.30
     ATOM 1845 N   ILE  446      10.875 31.151 73.133 1.00 26.98
     ATOM 1846 CA  ILE  446      11.010 30.511 71.840 1.00 25.95
     ATOM 1847 CB  ILE  446      10.656 29.013 71.961 1.00 26.36
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      ATOM  1848 CG2 ILE  446    10.295 28.431 70.595 1.00 24.39
      ATOM  1849 CG1 ILE  446    11.864 28.300 72.575 1.00 27.57
      ATOM  1850 CD1 ILE  446    11.637 26.869 72.971 1.00 27.13
      ATOM  1851 C   ILE  446    10.312 31.144 70.640 1.00 25.28
  5   ATOM  1852 O   ILE  446    10.917 31.247 69.571 1.00 23.47
      ATOM  1853 N   ALA  447     9.058 31.549 70.809 1.00 26.37
      ATOM  1854 CA  ALA  447     8.316 32.183 69.725 1.00 28.80
      ATOM  1855 CB  ALA  447     6.932 32.606 70.219 1.00 30.52
      ATOM  1856 C   ALA  447     9.114 33.394 69.218 1.00 28.51
 10   ATOM  1857 O   ALA  447     9.229 33.608 68.005 1.00 29.41
      ATOM  1858 N   GLY  448     9.675 34.164 70.155 1.00 28.53
      ATOM  1859 CA  GLY  448    10.474 35.337 69.811 1.00 27.89
      ATOM  1860 C   GLY  448    11.762 34.993 69.095 1.00 28.77
      ATOM  1861 O   GLY  448    12.167 35.692 68.162 1.00 28.23
 15   ATOM  1862 N   TYR  449    12.435 33.927 69.536 1.00 27.26
      ATOM  1863 CA  TYR  449    13.666 33.502 68.872 1.00 28.14
      ATOM  1864 CB  TYR  449    14.262 32.267 69.553 1.00 26.16
      ATOM  1865 CG  TYR  449    14.683 32.492 70.990 1.00 28.82
      ATOM  1866 CD1 TYR  449    14.913 33.782 71.482 1.00 29.84
 20   ATOM  1867 CE1 TYR  449    15.336 33.988 72.802 1.00 32.66
      ATOM  1868 CD2 TYR  449    14.881 31.412 71.853 1.00 29.90
      ATOM  1869 CE2 TYR  449    15.306 31.604 73.173 1.00 30.71
      ATOM  1870 CZ  TYR  449    15.532 32.887 73.641 1.00 32.74
      ATOM  1871 OH  TYR  449    15.979 33.070 74.939 1.00 36.98
 25   ATOM  1872 C   TYR  449    13.361 33.150 67.420 1.00 27.51
      ATOM  1873 O   TYR  449    14.116 33.491 66.513 1.00 27.99
      ATOM  1874 N   ILE  450    12.254 32.442 67.207 1.00 27.41
      ATOM  1875 CA  ILE  450    11.876 32.053 65.861 1.00 27.70
      ATOM  1876 CB  ILE  450    10.662 31.102 65.863 1.00 26.64
 30   ATOM  1877 CG2 ILE  450    10.292 30.744 64.413 1.00 26.88
      ATOM  1878 CG1 ILE  450    11.003 29.846 66.690 1.00 27.46
      ATOM  1879 CD1 ILE  450     9.811 28.956 67.032 1.00 24.45
      ATOM  1880 C   ILE  450    11.534 33.295 65.041 1.00 29.34
      ATOM  1881 O   ILE  450    11.994 33.440 63.911 1.00 30.32
 35   ATOM  1882 N   ARG  451    10.735 34.187 65.617 1.00 30.43
      ATOM  1883 CA  ARG  451    10.351 35.416 64.923 1.00 33.00
      ATOM  1884 CB  ARG  451     9.514 36.306 65.851 1.00 32.56
      ATOM  1885 CG  ARG  451     8.874 37.519 65.161 1.00 34.91
      ATOM  1886 CD  ARG  451     7.955 38.328 66.076 1.00 36.14
 40   ATOM  1887 NE  ARG  451     6.768 37.599 66.518 1.00 37.46
      ATOM  1888 CZ  ARG  451     6.669 36.943 67.672 1.00 40.02
      ATOM  1889 NH1 ARG  451     7.690 36.921 68.521 1.00 41.16
      ATOM  1890 NH2 ARG  451     5.547 36.299 67.976 1.00 40.59
      ATOM  1891 C   ARG  451    11.629 36.138 64.472 1.00 34.57
 45   ATOM  1892 O   ARG  451    11.761 36.516 63.298 1.00 34.59
      ATOM  1893 N   ASP  452    12.578 36.304 65.392 1.00 36.05
      ATOM  1894 CA  ASP  452    13.837 36.975 65.070 1.00 39.88
      ATOM  1895 CB  ASP  452    14.690 37.184 66.331 1.00 42.41
      ATOM  1896 CG  ASP  452    14.004 38.065 67.364 1.00 46.01
 50   ATOM  1897 OD1 ASP  452    13.162 38.897 66.961 1.00 46.57
      ATOM  1898 OD2 ASP  452    14.315 37.934 68.576 1.00 48.55
      ATOM  1899 C   ASP  452    14.657 36.212 64.039 1.00 40.80
      ATOM  1900 O   ASP  452    15.219 36.805 63.112 1.00 42.52
      ATOM  1901 N   ALA  453    14.730 34.896 64.197 1.00 41.16
 55   ATOM  1902 CA  ALA  453    15.493 34.071 63.272 1.00 42.41
      ATOM  1903 CB  ALA  453    15.585 32.643 63.796 1.00 41.71
      ATOM  1904 C   ALA  453    14.904 34.070 61.863 1.00 44.06
      ATOM  1905 O   ALA  453    15.635 33.910 60.887 1.00 44.96
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        ATOM  1906 N   LEU  454    13.590 34.259 61.759 1.00 45.34
        ATOM  1907 CA  LEU  454    12.921 34.261 60.460 1.00 47.12
        ATOM  1908 CB  LEU  454    11.419 33.989 60.631 1.00 42.61
        ATOM  1909 CG  LEU  454    11.078 32.514 60.884 1.00 38.89
  5     ATOM  1910 CD1 LEU  454     9.576 32.329 60.950 1.00 36.29
        ATOM  1911 CD2 LEU  454    11.660 31.657 59.764 1.00 36.23
        ATOM  1912 C   LEU  454    13.149 35.544 59.669 1.00 50.37
        ATOM  1913 O   LEU  454    13.255 35.506 58.443 1.00 51.61
        ATOM  1914 N   ARG  455    13.218 36.679 60.360 1.00 54.48
  10    ATOM  1915 CA  ARG  455    13.486 37.951 59.688 1.00 58.31
        ATOM  1916 CB  ARG  455    13.128 39.147 60.582 1.00 59.22
        ATOM  1917 CG  ARG  455    11.635 39.352 60.806 1.00 60.97
        ATOM  1918 CD  ARG  455    11.318 40.787 61.228 1.00 62.50
        ATOM  1919 NE  ARG  455    10.998 40.919 62.648 1.00 64.04
  15    ATOM  1920 CZ  ARG  455    11.873 40.784 63.640 1.00 64.71
        ATOM  1921 NH1 ARG  455    13.146 40.511 63.378 1.00 64.92
        ATOM  1922 NH2 ARG  455    11.470 40.923 64.897 1.00 64.48
        ATOM  1923 C   ARG  455    14.988 37.938 59.452 1.00 60.72
        ATOM  1924 O   ARG  455    15.597 38.964 59.147 1.00 61.55
  20    ATOM  1925 N   ASN  456    15.557 36.743 59.597 1.00 63.01
        ATOM  1926 CA  ASN  456    16.983 36.482 59.463 1.00 64.82
        ATOM  1927 CB  ASN  456    17.434 36.512 57.987 1.00 66.21
        ATOM  1928 CG  ASN  456    17.254 37.871 57.327 1.00 67.51
        ATOM  1929 OD1 ASN  456    17.901 38.850 57.702 1.00 68.69
  25    ATOM  1930 ND2 ASN  456    16.377 37.930 56.326 1.00 68.01
        ATOM  1931 C   ASN  456    17.795 37.442 60.317 1.00 65.37
        ATOM  1932 O   ASN  456    17.456 37.680 61.480 1.00 65.63
        ATOM  1933 N   GLY  457    18.858 37.997 59.749 1.00 65.99
        ATOM  1934 CA  GLY  457    19.704 38.896 60.510 1.00 66.46
  30    ATOM  1935 C   GLY  457    20.739 38.015 61.176 1.00 66.78
        ATOM  1936 O   GLY  457    21.568 38.471 61.968 1.00 67.21
        ATOM  1937 N   GLY  458    20.669 36.728 60.844 1.00 66.86
        ATOM  1938 CA  GLY  458    21.594 35.753 61.384 1.00 66.84
        ATOM  1939 C   GLY  458    22.018 34.761 60.315 1.00 66.86
  35    ATOM  1940 O   GLY  458    21.450 34.801 59.199 1.00 66.65
        ATOM  1941 OXT GLY  458    22.922 33.943 60.593 1.00 65.49
        ATOM  1942 OH2 TIP  1003   30.252 23.128 74.386 1.00 27.69
        ATOM  1943 OH2 TIP  1005   14.203 25.558 89.644 1.00 25.22
        ATOM  1944 OH2 TIP  1006    8.388 25.042 72.262 1.00 22.81
  40    ATOM  1945 OH2 TIP  1008    8.367 21.538 69.460 1.00 19.23
        ATOM  1946 OH2 TIP  1009   -7.350 22.030 52.884 1.00 80.11
        ATOM  1947 OH2 TIP  1010   -4.017 19.644 67.897 1.00 33.26
        ATOM  1948 OH2 TIP  1011    8.365  3.022 77.974 1.00 47.93
        ATOM  1949 OH2 TIP  1012   30.690  8.779 67.839 1.00 26.30
  45    ATOM  1950 OH2 TIP  1013   12.264  8.843 80.249 1.00 26.01
        ATOM  1951 OH2 TIP  1014   -1.764 16.382 62.652 1.00 44.82
        ATOM  1952 OH2 TIP  1015   20.301 34.946 75.498 1.00 51.92
        ATOM  1953 OH2 TIP  1016   14.443 15.693 61.296 1.00 22.04
        ATOM  1954 OH2 TIP  1017   12.487 31.635 78.951 1.00 36.76
  50    ATOM  1955 OH2 TIP  1018   16.579  6.557 83.739 1.00 27.86
        ATOM  1956 OH2 TIP  1019   -0.626 26.615 50.499 1.00 30.82
        ATOM  1957 OH2 TIP  1021    3.543 20.127 64.859 1.00 23.80
        ATOM  1958 OH2 TIP  1022    4.772  0.996 47.855 1.00 40.67
        ATOM  1959 OH2 TIP  1023    9.799 29.451 51.621 1.00 30.93
  55    ATOM  1960 OH2 TIP  1024    7.476 19.030 68.589 1.00 22.30
        ATOM  1961 OH2 TIP  1025   20.355  7.131 58.551 1.00 52.44
        ATOM  1962 OH2 TIP  1026   -0.829 29.526 57.153 1.00 31.90
        ATOM  1963 OH2 TIP  1027   11.560 -6.342 53.442 1.00 52.29
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        ATOM   1964  OH2 TIP  1028      15.278  0.625 72.808  1.00 27.12
        ATOM   1965  OH2 TIP  1029      22.593 26.832 76.012  1.00 35.56
        ATOM   1966  OH2 TIP  1031       3.001 25.878 68.078  1.00 22.76
        ATOM   1967  OH2 TIP  1032      13.489 25.800 47.958  1.00 47.50
   5    ATOM   1968  OH2 TIP  1033      -7.554 18.088 60.905  1.00 30.53
        ATOM   1969  OH2 TIP  1034      24.742 18.595 64.446  1.00 44.88
        ATOM   1970  OH2 TIP  1035      13.751 37.059 78.800  1.00 60.77
        ATOM   1971  OH2 TIP  1036      -0.515 10.167 75.163  1.00 36.51
        ATOM   1972  OH2 TIP  1037      12.373 35.911 72.901  1.00 32.65
  10    ATOM   1973  OH2 TIP  1039      23.543 26.270 78.523  1.00 24.40
        ATOM   1974  OH2 TIP  1040      17.896 20.961 59.259  1.00 39.57
        ATOM   1975  OH2 TIP  1041       8.248 15.187 89.930  1.00 59.85
        ATOM   1976  OH2 TIP  1042       7.418 31.128 73.133  1.00 34.33
        ATOM   1977  OH2 TIP  1043      21.123  8.890 53.894  1.00 67.39
  15    ATOM   1978  OH2 TIP  1045      15.162 18.243 53.355  1.00 28.26
        ATOM   1979  OH2 TIP  1050       4.216 23.224 44.827  1.00 46.56
        ATOM   1980  OH2 TIP  1051      17.523  1.262 73.909  1.00 23.12
        ATOM   1981  OH2 TIP  1052      -0.169 20.149 67.166  1.00 67.45
        ATOM   1982  OH2 TIP  1053      20.135 12.837 55.866  1.00 51.70
  20    ATOM   1983  OH2 TIP  1054      10.612 35.387 77.215  1.00 57.20
        ATOM   1984  OH2 TIP  1055      14.587 38.805 73.912  1.00 56.14
        ATOM   1985  OH2 TIP  1056      22.658 15.094 55.769  1.00 63.46
        ATOM   1986  OH2 TIP  1057       8.196  1.415 39.058  1.00 55.65
        ATOM   1987  OH2 TIP  1058      10.807  2.725 77.173  1.00 22.15
  25    ATOM   1988  OH2 TIP  1059      19.013 20.604 62.130  1.00 32.43
        ATOM   1989  OH2 TIP  1061       2.388 16.861 45.084  1.00 25.70
        ATOM   1990  OH2 TIP  1063       5.229  6.816 86.424  1.00 59.99
        ATOM   1991  OH2 TIP  1501      18.919 15.965 66.146  1.00 24.36
        ATOM   1992  OH2 TIP  1502       2.744 33.258 66.246  1.00 30.10
  30    ATOM   1993  OH2 TIP  1503       4.527 17.244 77.877  1.00 23.98
        ATOM   1994  OH2 TIP  1504      -0.815 22.723 68.903  1.00 24.06
        ATOM   1995  OH2 TIP  1506      22.697  1.204 69.760  1.00 28.71
        ATOM   1996  OH2 TIP  1507      12.438 25.185 81.547  1.00 28.20
        ATOM   1997  OH2 TIP  1508      17.107 31.275 76.636  1.00 33.34
  35    ATOM   1998  OH2 TIP  1509      17.900 15.686 59.270  1.00 37.88
        ATOM   1999  OH2 TIP  1510       7.197 12.183 44.002  1.00 29.62
        ATOM   2000  OH2 TIP  1511      -4.834 15.832 60.463  1.00 33.76
        ATOM   2001  OH2 TIP  1512      11.093  1.186 74.736  1.00 29.08
        ATOM   2002  OH2 TIP  1513      -0.145  2.568 51.845  1.00 30.78
  40    ATOM   2003  OH2 TIP  1514      -6.100 23.488 73.541  1.00 27.96
        ATOM   2004  OH2 TIP  1515       8.298 14.512 44.198  1.00 34.89
        ATOM   2005  OH2 TIP  1516       0.418 26.098 68.989  1.00 28.71
        ATOM   2006  OH2 TIP  1517      -7.177 16.116 59.030  1.00 32.04
        ATOM   2007  OH2 TIP  1519      18.000 18.387 62.314  1.00 32.49
  45    ATOM   2008  OH2 TIP  1520      21.777 20.403 61.898  1.00 38.66
        ATOM   2009  OH2 TIP  1521      -1.379 32.714 63.883  1.00 40.86
        ATOM   2010  OH2 TIP  1522       1.931 22.610 68.721  1.00 31.49
        ATOM   2011  OH2 TIP  1523      -3.158  9.157 64.790  1.00 46.08
        ATOM   2012  OH2 TIP  1524       2.081  4.709 65.432  1.00 38.87
  50    ATOM   2013  OH2 TIP  1525       3.829 11.325 75.940  1.00 34.36
        ATOM   2014  OH2 TIP  1527      21.845 33.747 71.839  1.00 51.86
        ATOM   2015  OH2 TIP  1528      12.196  0.941 78.760  1.00 46.53
        ATOM   2016  OH2 TIP  1529      30.316 21.478 85.009  1.00 28.49
        ATOM   2017  OH2 TIP  1530       9.786  2.798 91.182  1.00 58.36
  55    ATOM   2018  OH2 TIP  1531      16.571  8.007 48.772  1.00 38.32
        ATOM   2019  OH2 TIP  1532       3.764 24.595 70.409  1.00 31.40
        ATOM   2020  OH2 TIP  1533      -0.952  5.111 57.996  1.00 39.42
        ATOM   2021  OH2 TIP  1534       8.395 29.793 48.733  1.00 45.92
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     ATOM  2022  OH2 TIP  1535     18.190 -0.943 54.382 1.00 55.57
     ATOM  2023  OH2 TIP  1536      4.583 13.859 64.203 1.00 30.44
     ATOM  2024  OH2 TIP  1538     12.012 14.232 84.365 1.00 33.97
     ATOM  2025  OH2 TIP  1539     -1.284 36.017 69.736 1.00 57.91
  5  ATOM  2026  OH2 TIP  1540      2.454 15.898 79.022 1.00 40.22
     ATOM  2027  OH2 TIP  1544      2.719  2.670 49.088 1.00 32.00
     ATOM  2028  OH2 TIP  1545     13.537 37.410 71.136 1.00 41.29
     ATOM  2029  OH2 TIP  1546     22.697  0.071 79.248 1.00 32.01
     ATOM  2030  OH2 TIP  1548     -0.239  7.542 39.851 1.00 52.37
 10  ATOM  2031  OH2 TIP  1549      0.076 10.603 44.453 1.00 41.67
     ATOM  2032  OH2 TIP  1550     31.157  3.039 59.611 1.00 43.66
     ATOM  2033  OH2 TIP  1551      4.226 34.045 72.549 1.00 53.58
     ATOM  2034  OH2 TIP  1554     10.022 33.359 56.088 1.00 41.48
     ATOM  2035  OH2 TIP  1555     -1.058 37.708 61.917 1.00 54.81
 15  ATOM  2036  OH2 TIP  1556     -4.583 15.870 53.480 1.00 37.02
     ATOM  2037  OH2 TIP  1557     23.851  8.517 92.595 1.00 36.91
     ATOM  2038  OH2 TIP  1558     -7.204 28.744 59.955 1.00 35.72
     ATOM  2039  OH2 TIP  1560     19.483 16.334 88.331 1.00 34.61
     ATOM  2040  OH2 TIP  1561      1.968  8.086 38.648 1.00 57.90
 20  ATOM  2041  OH2 TIP  1562     32.430 -4.459 71.625 1.00 63.22
     ATOM  2042  OH2 TIP  1563      7.819 12.682 83.368 1.00 47.71
     ATOM  2043  OH2 TIP  1564     -5.435 18.376 72.810 1.00 41.90
     ATOM  2044  OH2 TIP  1565     19.550 17.394 63.917 1.00 31.79
     ATOM  2045  OH2 TIP  1566     24.069 28.502 85.703 1.00 50.24
 25  ATOM  2046  OH2 TIP  1568     26.854 12.830 56.392 1.00 51.68
     ATOM  2047  OH2 TIP  1570      3.595 32.325 68.760 1.00 45.07
     ATOM  2048  OH2 TIP  1571     24.805  8.300 62.036 1.00 28.27
     ATOM  2049  OH2 TIP  1572      4.194 17.554 63.640 1.00 26.21
     ATOM  2050  OH2 TIP  1573      2.589 20.195 67.352 1.00 34.52
 30  ATOM  2051  OH2 TIP  1574     15.713 17.937 61.017 1.00 52.03
     ATOM  2052  OH2 TIP  1575     -9.321 14.210 59.772 1.00 33.92
     ATOM  2053  OH2 TIP  1576     13.215  7.332 82.542 1.00 31.45
     ATOM  2054  OH2 TIP  1577     10.470 24.539 83.194 1.00 35.29
     ATOM  2055  OH2 TIP  1578     25.712 17.999 53.496 1.00 41.46
 35  ATOM  2056  OH2 TIP  1579      9.445 -0.239 41.882 1.00 41.51
     ATOM  2057  OH2 TIP  1580      6.603 16.005 42.611 1.00 32.35
     ATOM  2058  OH2 TIP  1581     -1.523  7.654 59.739 1.00 50.11
     ATOM  2059  OH2 TIP  1582      8.397 34.515 72.891 1.00 33.81
     ATOM  2060  OH2 TIP  1583      2.742 39.191 60.949 1.00 39.77
 40  ATOM  2061  OH2 TIP  1584     18.933  6.009 52.002 1.00 45.27
     ATOM  2062  OH2 TIP  1585     -1.653 20.171 69.665 1.00 37.15
     ATOM  2063  OH2 TIP  1586     -2.633  4.655 52.475 1.00 49.05
     ATOM  2064  OH2 TIP  1587     36.297 28.180 83.444 1.00 41.56
     ATOM  2065  OH2 TIP  1588     -0.851 31.806 55.808 1.00 34.41
 45  ATOM  2066  OH2 TIP  1589      4.002 34.625 70.007 1.00 46.13
     ATOM  2067  OH2 TIP  1590     32.711 20.152 84.581 1.00 53.56
     ATOM  2068  OH2 TIP  1591     19.998  6.099 87.630 1.00 31.12
     ATOM  2069  OH2 TIP  1593     -0.189  3.637 35.682 1.00 54.58
     ATOM  2070  OH2 TIP  1594     12.455 12.705 39.358 1.00 55.12
 50  ATOM  2071  OH2 TIP  1596     -2.554 -6.074 47.925 1.00 55.01
     ATOM  2072  OH2 TIP  1597      5.017 28.176 75.017 1.00 42.02
     ATOM  2073  OH2 TIP  1598     28.617 32.433 80.891 1.00 65.40
     ATOM  2074  OH2 TIP  1599      8.680  7.258 78.481 1.00 52.56
     ATOM  2075  OH2 TIP  1600     18.188 12.950 87.437 1.00 47.03
 55  ATOM  2076  OH2 TIP  1601    -11.532 19.931 55.756 1.00 48.92
     ATOM  2077  OH2 TIP  1602     22.073 14.215 52.571 1.00 49.32
     ATOM  2078  OH2 TIP  1603     -3.860 34.262 53.170 1.00 48.97
     ATOM  2079  OH2 TIP  1604      1.118 10.847 82.180 1.00 44.11
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        ATOM  2080  OH2 TIP  1605      19.335  32.031  77.782  1.00 48.61
        ATOM  2081  OH2 TIP  1606      19.174   9.955  48.654  1.00 40.42
        ATOM  2082  OH2 TIP  1607      23.632  -1.631  71.300  1.00 37.97
        ATOM  2083  OH2 TIP  1608      26.622  26.695  85.361  1.00 44.14
    5   ATOM  2084  OH2 TIP  1609      22.586  -1.769  57.526  1.00 48.15
        ATOM  2085  OH2 TIP  1610      21.977   5.567  60.712  1.00 37.76
        ATOM  2086  OH2 TIP  1611      21.634   2.725  67.903  1.00 41.42
        ATOM  2087  OH2 TIP  1612       4.046   4.187  75.513  1.00 55.86
        ATOM  2088  OH2 TIP  1614       0.807  25.979  47.960  1.00 38.30
   10   ATOM  2089  OH2 TIP  1615      17.333  37.351  72.160  1.00 55.70
        ATOM  2090  OH2 TIP  1616       2.475  15.902  62.566  1.00 38.40
        ATOM  2091  OH2 TIP  1618       0.658  14.983  64.592  1.00 60.57
        ATOM  2092  OH2 TIP  1619      -6.509  17.844  52.643  1.00 41.17
        ATOM  2093  OH2 TIP  1621      27.000  -1.287  80.946  1.00 51.49
   15   ATOM  2094  OH2 TIP  1622       3.271   9.154  86.392  1.00 55.17
        ATOM  2095  OH2 TIP  1627       3.433  19.409  44.225  1.00 50.54
        ATOM  2096  OH2 TIP  1628       2.390  26.629  72.360  1.00 42.60
        ATOM  2097  OH2 TIP  1629       9.893  39.104  69.833  1.00 54.40
        ATOM  2098  OH2 TIP  1630       2.709  14.153  43.455  1.00 34.37
   20   ATOM  2099  OH2 TIP  1631      11.049  12.448  88.232  1.00 45.81
        ATOM  2100  OH2 TIP  1632       4.576  31.506  72.757  1.00 39.34
        ATOM  2101  OH2 TIP  1634       6.784  36.285  71.148  1.00 51.53
        ATOM  2102  OH2 TIP  1635       6.667  43.335  56.568  1.00 51.21
        ATOM  2103  OH2 TIP  1636      -5.771   9.260  60.442  1.00 44.79
   25   ATOM  2104  OH2 TIP  1638       0.052  33.418  66.937  1.00 47.03
        ATOM  2105  OH2 TIP  1641       0.354   1.055  46.133  1.00 54.03
        ATOM  2106  OH2 TIP  1642      24.406  30.113  88.300  1.00 48.82
        ATOM  2107  OH2 TIP  1643      26.619  20.182  66.495  1.00 38.01
        ATOM  2108  OH2 TIP  1644      17.492   7.024  42.815  1.00 65.02
   30   ATOM  2109  OH2 TIP  1645      25.942  26.481  82.676  1.00 49.52
        ATOM  2110  OH2 TIP  1646      20.601  16.199  68.672  1.00 37.35
        ATOM  2111  OH2 TIP  1649      27.616   9.156  63.460  1.00 37.92
        ATOM  2112  OH2 TIP  1650       0.428  -3.038  44.190  1.00 54.50
        ATOM  2113  OH2 TIP  1652      -7.028  20.462  59.299  1.00 33.58
   35   ATOM  2114  OH2 TIP  1653      -2.848  32.314  67.354  1.00 49.02
        ATOM  2115  OH2 TIP  1654      -0.686  17.762  66.362  1.00 46.03
        ATOM  2116  OH2 TIP  1655      19.583  17.275  60.162  1.00 41.00
        ATOM  2117  OH2 TIP  1656      13.719  36.618  75.139  1.00 51.89
        ATOM  2118  OH2 TIP  1657       9.386  -0.422  71.399  1.00 43.15
   40   ATOM  2119  OH2 TIP  1659      23.690  28.880  79.578  1.00 42.62
        ATOM  2120  OH2 TIP  1660      22.069   3.800  58.682  1.00 46.06
        ATOM  2121  OH2 TIP  1661      20.671  13.353  58.841  1.00 57.05
        ATOM  2122  OH2 TIP  1662      27.473  10.135  82.332  1.00 47.43
        ATOM  2123  OH2 TIP  1664       9.564  26.542  84.601  1.00 44.55
   45   ATOM  2124  OH2 TIP  1666      29.122   9.606  65.764  1.00 45.20
        ATOM  2125  OH2 TIP  1668      13.135  20.507  41.865  1.00 59.09
        ATOM  2126  OH2 TIP  1669      22.639  11.672  58.999  1.00 54.98
        ATOM  2127  OH2 TIP  1670      -1.845   6.027  76.197  1.00 48.89
        ATOM  2128  OH2 TIP  1672       4.883  25.252  42.734  1.00 51.13
   50   ATOM  2129  OH2 TIP  1675       1.329  39.322  66.763  1.00 68.30
        ATOM  2130  OH2 TIP  1676      12.783  29.313  87.079  1.00 54.62
        ATOM  2131  OH2 TIP  1679      25.035  18.339  57.364  1.00 54.53
        ATOM  2132  OH2 TIP  1682      29.392  -1.856  57.721  1.00 37.30
        ATOM  2133  OH2 TIP  1683      28.780   9.970  58.622  1.00 54.22
   55   ATOM  2134  OH2 TIP  1685       4.741  39.274  62.499  1.00 46.58
        ATOM  2135  OH2 TIP  1686      -3.084   6.977  49.478  1.00 57.17
        ATOM  2136  OH2 TIP  1687      26.519  30.868  83.197  1.00 64.53
        ATOM  2137  OH2 TIP  1688      -2.784  37.278  67.289  1.00 59.53
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     ATOM  2138 OH2 TIP  1689     18.691 10.604 88.296 1.00 52.44
     ATOM  2139 OH2 TIP  1690     27.919  6.703 82.226 1.00 44.84
     ATOM  2140 OH2 TIP  1691     -4.338 11.103 48.033 1.00 55.91
     ATOM  2141 OH2 TIP  1692     -7.853  9.429 46.864 1.00 63.74
  5  ATOM  2142 OH2 TIP  1693     10.901 -1.686 67.477 1.00 41.21
     ATOM  2143 OH2 TIP  1694     -2.114  6.315 55.259 1.00 56.21
     ATOM  2144 OH2 TIP  1695     17.482 15.932 44.391 1.00 41.18
     ATOM  2145 OH2 TIP  1696    -12.326 38.088 61.786 1.00 53.30
     ATOM  2146 OH2 TIP  1697     -2.176 40.471 68.230 1.00 68.88
 10  ATOM  2147 OH2 TIP  1700      6.514 -1.974 53.366 1.00 51.67
     ATOM  2148 OH2 TIP  1701     21.800 10.610 55.773 1.00 60.93
     ATOM  2149 OH2 TIP  1702      3.975 27.046 41.446 1.00 44.88
     ATOM  2150 OH2 TIP  1703     26.678 -3.660 64.081 1.00 62.42
     ATOM  2151 OH2 TIP  1704      2.958 12.027 86.133 1.00 53.52
 15  ATOM  2152 OH2 TIP  1705      4.264 22.050 63.018 1.00 16.96
     ATOM  2153 OH2 TIP  1706     22.999 26.329 63.006 1.00 32.17
     ATOM  2154 OH2 TIP  1707      5.614  2.688 68.201 1.00 42.08
     ATOM  2155 OH2 TIP  1708     -2.967 17.730 54.394 1.00 38.89
     ATOM  2156 OH2 TIP  1709     25.853 10.594 62.118 1.00 43.50
 20  ATOM  2157 OH2 TIP  1711     13.060 12.966 86.563 1.00 41.22
     ATOM  2158 OH2 TIP  1712     19.784 15.472 45.489 1.00 58.17
     ATOM  2159 OH2 TIP  1713     10.567 14.806 42.991 1.00 43.48
     ATOM  2160 OH2 TIP  1714     24.079 30.190 83.477 1.00 47.61
     ATOM  2161 OH2 TIP  1715     23.927 21.975 63.464 1.00 44.77
 25  ATOM  2162 OH2 TIP  1716     15.801 20.193 58.769 1.00 34.32
     ATOM  2163 OH2 TIP  1717     23.867 27.717 72.712 1.00 40.47
     ATOM  2164 OH2 TIP  1718     24.567 27.201 69.884 1.00 45.97
     ATOM  2165 OH2 TIP  1719     32.141 -1.375 73.278 1.00 62.31
     ATOM  2166 OH2 TIP  1720     19.799 24.122 57.454 1.00 35.07
 30  ATOM  2167 OH2 TIP  1721     18.297 23.286 53.598 1.00 43.88
     ATOM  2168 OH2 TIP  1722      8.617  1.105 73.470 1.00 48.55
     ATOM  2169 OH2 TIP  1723     28.598 25.728 64.296 1.00 46.24
     ATOM  2170 OH2 TIP  1725     19.225 33.547 73.276 1.00 44.07
     ATOM  2171 OH2 TIP  1726      1.762  4.546 47.584 1.00 50.27
 35  ATOM  2172 OH2 TIP  1727     10.895 28.774 83.657 1.00 54.87
     ATOM  2173 OH2 TIP  1728      9.989 36.628 73.713 1.00 46.56
     ATOM  2174 OH2 TIP  1729     -1.331  8.332 70.133 1.00 46.76
     ATOM  2175 OH2 TIP  1730     24.262 12.802 55.386 1.00 59.24
     ATOM  2176 OH2 TIP  1731     28.623 25.788 86.798 1.00 51.87
 40  ATOM  2177 OH2 TIP  1732     -0.501  4.843 68.521 1.00 47.96
     ATOM  2178 OH2 TIP  1736     18.422  4.635 54.793 1.00 51.00
     ATOM  2179 OH2 TIP  1737     -5.388 27.319 50.727 1.00 46.53
     ATOM  2180 OH2 TIP  1738     -2.286 20.842 72.915 1.00 45.95
     ATOM  2181 OH2 TIP  1739      0.996  4.268 39.511 1.00 52.67
 45  ATOM  2182 OH2 TIP  1740    -10.886 28.616 64.116 1.00 45.22
     ATOM  2183 OH2 TIP  1741     20.353 -4.883 70.512 1.00 61.31
     ATOM  2184 OH2 TIP  1742     22.491 16.164 60.365 1.00 58.19
     ATOM  2185 OH2 TIP  3001     15.272 21.419 87.789 1.00 27.44
     ATOM  2186 OH2 TIP  3002     13.055 32.876 52.925 1.00 53.35
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     ATOM  2190 OH2 TIP  3010     30.041 24.325 84.969 1.00 41.40
     ATOM  2191 OH2 TIP  3007     -2.102 35.612 60.958 1.00 52.05
 55  ATOM  2192 OH2 TIP  3011      7.242 14.501 40.017 1.00 51.46
     ATOM  2193 OH2 TIP  3012      1.031 36.834 60.593 1.00 49.05
     ATOM  2194 OH2 TIP  3013      0.026 24.244 72.355 1.00 42.35
     ATOM  2195 OH2 TIP  3015     -7.871 31.986 57.037 1.00 46.09
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      ATOM  2196 OH2 TIP  3019      8.655  -3.490 62.423 1.00 44.56
      ATOM  2197 OH2 TIP  3020     -0.191  30.553 51.677 1.00 54.31
      ATOM  2198 OH2 TIP  3023      3.107  37.905 57.599 1.00 48.07
      ATOM  2199 OH2 TIP  3024     26.217   6.182 84.277 1.00 47.75
   5  ATOM  2200 OH2 TIP  3025      2.594  16.520 65.838 1.00 40.67
      ATOM  2201 C1  EPH  4000     23.874  12.843 85.264 1.00 42.79
      ATOM  2202 C2  EPH  4000     23.099  13.772 86.129 1.00 44.39
      ATOM  2203 C4  EPH  4000     24.923  13.000 83.062 1.00 45.55
      ATOM  2204 O2  EPH  4000     24.221  13.543 84.059 1.00 44.96
  10  ATOM  2205 O4  EPH  4000     25.350  11.876 83.028 1.00 47.53
      ATOM  2206 C18 EPH  4000     25.126  14.045 81.931 1.00 47.05
      ATOM  2207 C19 EPH  4000     24.674  13.569 80.547 1.00 46.98
      ATOM  2208 C20 EPH  4000     23.168  13.412 80.473 1.00 49.00
      ATOM  2209 C21 EPH  4000     22.772  12.939 79.111 1.00 51.06
  15  ATOM  2210 C22 EPH  4000     21.365  12.327 79.073 1.00 52.88
      ATOM  2211 C23 EPH  4000     20.291  13.230 78.423 1.00 54.24
      ATOM  2212 C24 EPH  4000     20.651  13.777 77.022 1.00 55.08
      ATOM  2213 C25 EPH  4000     19.987  15.129 76.704 1.00 56.13
      ATOM  2214 C26 EPH  4000     20.807  16.375 77.147 1.00 56.19
  20  ATOM  2215 C27 EPH  4000     19.981  17.687 77.287 1.00 56.74
      ATOM  2216 C28 EPH  4000     19.188  18.077 76.015 1.00 56.93
      ATOM  2217 C29 EPH  4000     20.055  18.393 74.792 1.00 57.07
      ATOM  2218 C30 EPH  4000     19.294  18.387 73.442 1.00 58.24
      ATOM  2219 C31 EPH  4000     19.391  17.124 72.550 1.00 58.70
  25  ATOM  2220 C32 EPH  4000     18.019  16.479 72.198 1.00 59.07
      ATOM  2221 C33 EPH  4000     16.762  17.158 72.768 1.00 59.61
      ATOM  2222 C34 EPH  4000     15.463  16.541 72.231 1.00 60.17
      ATOM  2223 C37 EPH  4000     22.780  13.059 87.421 1.00 47.03
      ATOM  2224 O5  EPH  4000     22.047  13.939 88.273 1.00 53.23
  30  ATOM  2225 P1  EPH  4000     21.699  13.222 89.578 1.00 56.71
      ATOM  2226 O6  EPH  4000     20.350  13.536 89.939 1.00 58.07
      ATOM  2227 O7  EPH  4000     22.579  12.360 90.311 1.00 56.72
      ATOM  2228 O8  EPH  4000     22.167  14.340 90.336 1.00 55.93
      ATOM  2229 C3  EPH  4000     21.561  15.394 85.253 1.00 42.20
  35  ATOM  2230 O1  EPH  4000     21.886  14.117 85.454 1.00 40.69
      ATOM  2231 O3  EPH  4000     22.221  16.347 85.571 1.00 40.97
      ATOM  2232 C5  EPH  4000     20.215  15.530 84.546 1.00 40.77
      ATOM  2233 C6  EPH  4000     20.313  15.776 83.050 1.00 42.19
      ATOM  2234 C7  EPH  4000     18.924  15.916 82.453 1.00 43.05
  40  ATOM  2235 C8  EPH  4000     18.900  15.944 80.947 1.00 44.57
      ATOM  2236 C9  EPH  4000     17.477  16.101 80.445 1.00 45.49
      ATOM  2237 C10 EPH  4000     17.167  15.209 79.273 1.00 47.18
      ATOM  2238 C11 EPH  4000     16.561  15.987 78.117 1.00 47.85
      ATOM  2239 C12 EPH  4000     15.158  15.514 77.781 1.00 49.75
  45  ATOM  2240 C13 EPH  4000     15.158  14.254 76.932 1.00 49.27
      ATOM  2241 C14 EPH  4000     14.899  14.563 75.454 1.00 51.41
      ATOM  2242 C15 EPH  4000     14.958  13.341 74.490 1.00 51.93
      ATOM  2243 C16 EPH  4000     16.376  12.870 74.074 1.00 52.39
      ATOM  2244 C17 EPH  4000     16.681  11.465 74.554 1.00 52.37
  50  ATOM  2245 C35 EPH  4000     17.830  11.518 75.525 1.00 52.96
      ATOM  2246 C36 EPH  4000     17.968  10.168 76.193 1.00 53.00
      ATOM  2247 C38 EPH  4000     22.197  10.885 90.057 1.00 56.75
      ATOM  2248 C39 EPH  4000     23.458  10.026 89.911 1.00 56.42
      ATOM  2249 N1  EPH  4000     24.546  10.825 89.334 1.00 54.45
  55  ATOM  2250 N   SER  236      17.914  25.370 86.674 0.50 20.48     AC2
      ATOM  2251 CA  SER  236      18.176  23.976 86.323 0.50 19.91     AC2
      ATOM  2252 CB  SER  236      19.157  23.889 85.166 0.50 18.72     AC2
      ATOM  2253 OG  SER  236      19.325  22.538 84.787 0.50 17.70     AC2
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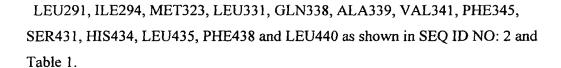
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	ATOM	2256	N	SER	247	25.235	21.608	79.357	0.50 19.68	AC2
	ATOM	2257	CA	SER	247	25.203	22.865	78.619	0.50 20.48	AC2
5	ATOM	2258	CB	SER	247	26.051	23.917	79.337	0.50 19.95	AC2
	ATOM	2259	OG	SER	247	26.032	25.152	78.637	0.50 20.60	AC2
	ATOM	2260	C	SER	247	25.725	22.638	77.203	0.50 20.84	AC2
	ATOM	2261	O	SER	247	25.203	23.202	76.238	0.50 21.05	AC2
	ATOM	2262	N	SER	271	7.551	30.448	53.176	0.50 29.97	AC2
10	ATOM	2263	CA	SER	271	7.680	31.880	53.442	0.50 31.61	AC2
	ATOM	2264	CB	SER	271	8.888	32.443	52.695	0.50 32.22	AC2
	ATOM	2265	OG	SER	271	8.666	32.395	51.295	0.50 32.71	AC2
	ATOM	2266	C	SER	271	6.432	32.648	53.010	0.50 32.99	AC2
	ATOM	2267	O	SER	271	6.229	33.796	53.408	0.50 34.05	AC2
15	ATOM	2268	N	PRO	319	18.143	-4.099	74.681	0.50 41.20	AC2
	ATOM	2269	CD	PRO	319	18.070	-4.311	76.139	0.50 40.63	AC2
	ATOM	2270	CA	PRO	319	18.053	-2.673	74.356	0.50 38.50	AC2
	ATOM	2271	CB	PRO	319	17.702	-2.038	75.699	0.50 39.26	AC2
	ATOM	2272	CG	PRO	319	18.406	-2.938	76.680	0.50 39.94	AC2
20	ATOM	2273	C	PRO	319	19.321	-2.077	73.756	0.50 35.96	AC2
	ATOM	2274	O	PRO	319	20.410	-2.230	74.313	0.50 35.87	AC2
	ATOM	2275	N	GLN	343	13.913	5.584	80.085	0.50 18.73	AC2
	ATOM	2276	CA	GLN	343	12.714	5.137	79.387	0.50 19.83	AC2
	ATOM	2277	CB	GLN	343	11.463	5.365	80.243	0.50 21.34	AC2
25	ATOM	2278	CG	GLN	343	10.903	4.078	80.837	0.50 26.09	AC2
	ATOM	2279	CD	GLN	343	9.539	4.244	81.488	0.50 27.02	AC2
	ATOM	2280	OE1	GLN	343	9.412	4.823	82.562	0.50 29.15	AC2
	ATOM	2281	NE2	GLN	343	8.508	3.730	80.829	0.50 29.67	AC2
	ATOM	2282	C	GLN	343	12.545	5.813	78.025	0.50 19.53	AC2
30	ATOM	2283	O	GLN	343	12.317	5.141	77.022	0.50 19.10	AC2
	ATOM	2284	N	SER	353	14.027	4.461	65.783	0.50 19.97	AC2
	ATOM	2285	CA	SER	353	15.191	3.950	65.107	0.50 20.43	AC2
	ATOM	2286	CB	SER	353	16.391	4.058	66.033	0.50 20.57	AC2
	ATOM	2287	OG	SER	353	17.540	4.234	65.262	0.50 19.64	AC2
35	ATOM	2288	C	SER	353	15.054	2.524	64.574	0.50 21.08	AC2
	ATOM	2289	O	SER	353	15.234	2.291	63.378	0.50 21.51	AC2
	ATOM	2290	N	ARG	392	0.696	20.186	53.122	0.50 19.50	AC2
	ATOM	2291	CA	ARG	392	0.935	18.822	53.549	0.50 19.96	AC2
	ATOM	2292	CB	ARG	392	0.325	18.551	54.925	0.50 19.99	AC2
40	ATOM	2293	CG	ARG	392	0.603	17.129	55.384	0.50 19.08	AC2
	ATOM	2294	CD	ARG	392	0.140	16.884	56.805	0.50 19.85	AC2
	ATOM	2295	NE	ARG	392	-1.315	16.885	56.925	0.50 19.23	AC2
	ATOM	2296	CZ	ARG	392	-1.962	16.577	58.046	0.50 21.63	AC2
	ATOM	2297	NH1	ARG	392	-1.283	16.242	59.138	0.50 19.92	AC2
45	ATOM	2298	NH2	ARG	392	-3.289	16.611	58.086	0.50 22.19	AC2
	ATOM	2299	C	ARG	392	0.338	17.878	52.501	0.50 19.95	AC2
	ATOM	2300	O	ARG	392	0.940	16.867	52.149	0.50 20.64	AC2
	ATOM	2301	N	SER	431	9.466	14.172	75.955	0.50 16.96	AC2
	ATOM	2302	CA	SER	431	10.735	14.900	76.047	0.50 17.25	AC2
50	ATOM	2303	CB	SER	431	11.346	15.109	74.659	0.50 17.09	AC2
	ATOM	2304	OG	SER	431	10.765	16.211	73.998	0.50 16.93	AC2
	ATOM	2305	C	SER	431	10.466	16.249	76.719	0.50 17.71	AC2
	ATOM	2306	O	SER	431	11.267	16.716	77.521	0.50 17.14	AC2 .

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6.   A LBD according to Claim 5, comprising a ligand-binding pocket which is

defined by the amino acids LEU230, VAL238, PRO239, PHE242, LEU249,

LEU291, ILE294, MET323, LEU331, GLN338, ALA339, VAL341, PHE345, SER431, HIS434, LEU435, PHE438 and LEU440 as shown in SEQ ID NO: 2 and Table 1.

5   7.   A LBD according to Claim 5, comprising a ligand-binding pocket which is defined by the amino acids LEU230, VAL238, PRO239, PHE242, PRO245, VAL246, LEU249, CYS250, GLY253, ASN287, LEU290, LEU291, ILE294, MET323, LEU325, LEU331, SER335, ALA336, GLN338, ALA339, VAL341, ILE344, PHE345, VAL348, SER431, HIS434, LEU435, PHE438, LEU440 as

10   shown in SEQ ID NO: 2 and Table 1.

8.   A computer-readable data-storage medium comprising a data-storage material in which the structure coordinates of an LBD according to Claim 1 are stored.

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9.   A computer-readable data-storage medium comprising a data-storage material in which the structure coordinates of an LBD according to Claim 1 are stored in a form which makes it possible to generate a three-dimensional image of an LBD according to Claim 1 on a computer screen.

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10.   A method for generating protein models of USP-LBDs, comprising the step of preparing by computer-aided generation a three-dimensional image of an LBD according to Claim 1.

25   11.   A method for generating protein models of USP-LBDs in an agonistic conformation comprising the step of preparing by computer-aided generation a three-dimensional image of an LBD according to Claim 1 in an agonistic conformation.

30   12.   A method for generating protein models of nuclear receptors with homologies to USP-LBDs, comprising the step of preparing by computer-aided

generation a three-dimensional image of an LBD according to Claim 1 with a mutated amino acid sequence.

13.   A method for generating protein models of nuclear receptors with
5   homologies to USP-LBDs, in an agonistic conformation, comprising the step of preparing by computer-aided generation a three-dimensional image of an LBD according to Claim 1 with a mutated amino acid sequence in an agonistic conformation.

10   14.   A method of finding USP ligands, comprising the steps of:

(a)   preparing by computer-aided generation a three-dimensional image of an LBD according to Claim 1, and

(b)   performing computer-aided (virtual) screening of databases which contain structural data of chemical compounds for those structures
15   which are capable of undergoing specific interactions with an LBD according to Claim 1.

15.   A method of finding USP ligands, comprising the steps of:

(a)   preparing by computer-aided generation a three-dimensional image
20   of an LBD according to Claim 1, and

(b)   performing computer-aided modelling of chemical compounds with structures which are capable of undergoing specific interactions with an LBD according to Claim 1.

25   16.   A method of finding USP-LBD ligands in an agonistic conformation, comprising the steps of:

(a)   preparing by computer-aided generation a three-dimensional image of an LBD according to Claim 1 in an agonistic conformation, and

(b)   performing computer-aided (virtual) screening of databases which
30   contain structural data of chemical compounds for those structures which are capable of undergoing specific interactions with an LBD in an agonistic conformation.

17.   A method of finding USP-LBD ligands in an agonistic conformation, comprising the steps of:

    (a)   preparing by computer-aided generation a three-dimensional image

5   of an LBD according to Claim 1 in an agonistic conformation, and

    (b)   performing computer-aided modelling of chemical compounds with structures which are capable of undergoing specific interactions with an LBD in an agonistic conformation.

10   18.   A method of finding active compounds for crop protection, in particular chemical compounds which, owing to binding to an LBD according to Claim 1, bring about the activation or inhibition of USP, comprising the steps of:

    (a)   preparing by computer-aided generation a three-dimensional image

15   of an LBD according to Claim 1,

    (b)   performing computer-aided (virtual) screening of databases which contain structural data of chemical compounds for those structures which are capable of undergoing specific interactions with an LBD according to Claim 1,

20   (c)   synthesizing the compound(s) identified as ligands, and

    (d)   detecting the bioactivity of the compound synthesized in step (c) by transactivation assays, displacement assays or bioassays.

19.   A method of finding active compounds for crop protection, in particular

25   chemical compounds which, owing to binding to an LBD according to Claim 1 in an agonistic conformation, bring about the activation or inhibition of USP, comprising the steps of:

    (a)   preparing by computer-aided generation a three-dimensional image of an LBD according to Claim 1 in an agonistic conformation,

30   (b)   performing computer-aided (virtual) screening of databases which contain structural data of chemical compounds for those structures

which are capable of undergoing specific interactions with an LBD in an

agonistic conformation,

    (c)   synthesizing the compound(s) identified as ligands, and

    (d)   detecting the bioactivity of the compound synthesized in step (c) by

5   transactivation assays, displacement assays or bioassays.

20.   A method of finding effectors for systems for the inducible expression of

target genes by means of USP, comprising the steps of:

    (a)   preparing by computer-aided generation a three-dimensional image

10   of an LBD according to Claim 1,

    (b)   performing computer-aided (virtual) screening of databases which

contain structural data of chemical compounds for those structures

which are capable of undergoing specific interactions with an LBD

according to Claim 1,

15   (c)   synthesizing the compound(s) identified as ligands,

    (d)   applying a compound synthesized in step (c) to host cells or host

organisms comprising a USP-based expression system, and

    (e)   detecting an induction or inhibition of the expression system.:

20   21.   A method of finding active compounds for crop protection, in particular

chemical compounds which, owing to binding to an LBD according to

Claim 1, bring about the activation or inhibition of USP, comprising the

steps of:

    (a)   preparing by computer-aided generation a three-dimensional image

25   of an LBD according to Claim 1,

    (b)   performing   computer-aided modelling of chemical compounds

with   structures   which   are   capable   of   undergoing   specific

interactions with an LBD according to Claim 1,

    (c)   synthesizing the compound(s) identified as ligands, and

30   (d)   detecting the bioactivity of the compound synthesized in step (c) by

transactivation assays, displacement assays or bioassays.

22.   A method of finding active compounds for crop protection, in particular
chemical compounds which, owing to binding to an LBD according to
Claim 1 in an agonistic conformation, bring about the activation or
inhibition of USP, comprising the steps of:

5   (a)   preparing by computer-aided generation a three-dimensional image
of an LBD according to Claim 1 in an agonistic conformation, and

(b)   performing computer-aided modelling of chemical compounds with
structures which are capable of undergoing specific interactions
with an LBD in an agonistic conformation.

10   (c)   synthesizing the compound(s) identified as ligands, and

(d)   detecting the bioactivity of the compound synthesized in step (c) by
transactivation assays, displacement assays or bioassays.

23.   A method of finding effectors for systems for the inducible expression of

15   target genes by means of USP, comprising the steps of:

(a)   preparing by computer-aided generation a three-dimensional image
of an LBD according to Claim 1,

(b)   performing computer-aided modelling of chemical compounds
with structures which are capable of undergoing specific

20   interactions with an LBD according to Claim 1,

(c)   synthesizing the compound(s) identified as ligands,

(d)   applying a compound synthesized in step (c) to host cells or host
organisms comprising a USP-based expression system, and

(e)   detecting an induction or inhibition of the expression system.